FEDERAL AVIATION ADMINISTRATION—WASHINGTON, DC

CHANGE 17

EFFECTIVE: FEBRUARY 7, 1997
MARCH 12, 1997
MARCH 21, 1997
MAY 1, 1997

Part 121—Operating Requirements: Domestic, Flag, and Supplemental Operations

This change incorporates two amendments, removes then reinstates SFAR 50–2, and adds SFAR 78 and SFAR 80:

Amendment 121–262, Operating Requirements: Domestic, Flag, Supplemental, Commuter, and On-Demand Operations: Editorial and Other Changes, adopted and effective March 12, 1997. This amendment affects §§ 121.2, 121.99, 121.137, 121.139, 121.305, 121.310, 121.333, 121.437, 121.590, and 121.713.

Amendment 121–263, Aircraft Flight Simulator Use in Pilot Training, Testing, and Checking and at Training Centers; Editorial and Other Changes, adopted March 18 and effective March 21, 1997. Sections 121.402, 121.431, and 121.441 are affected.

Bold brackets appear around the revised or added material. The amendment number and effective date of these changes appear in bold brackets at the end of each affected section.

Page Control Chart

Remove Pages	Dated	Insert Pages	Dated
P–1351	Ch. 16	P–1351 through P–1363	Ch. 17
Subpart A	Ch. 15	Subpart A	Ch. 17
Subpart E	Ch. 14	Subpart E	Ch. 17
Subpart G	Ch. 13	Subpart G	Ch. 17
Subpart K	Ch. 16	Subpart K	Ch. 17
Subpart N	Ch. 15	Subpart N	Ch. 17
Subpart O	Ch. 15	Subpart O	Ch. 17
Subpart T	Ch. 13	Subpart T	Ch. 17
Subpart V	Ch. 13	Subpart V	Ch. 17
S–56–3 through S–56–8	Ch. 13	S–56–3 through S–56–11	Ch. 17
		S–75 through S–103	Ch. 17

Suggest filing this transmittal at the beginning of the FAR. It will provide a method for determining that all changes have been received as listed in the current edition of AC 00–44, Status of Federal Aviation Regulations, and a check for determining if the FAR contains the proper pages.

small entities. None of the final amendments will have a significant affect on air carrier costs. Therefore, the FAA has determined that the final amendments to § 121.337, if promulgated, will not have a significant economic impact on a substantial number of small entities.

International Trade Impact Assessment

The rule will impose no additional cost burden on either domestic or international all-cargo carriers. Hence, the amendment will not cause any competitive trade advantage or disadvantage to either the U.S. or to any foreign country.

Federalism Implications

This rule will not have a substantial direct effect on the States, on the relationship between the National Government and the States, or on the distribution of power and responsibilities among the various levels of Government. Therefore, in accordance with Executive Order 12612, it is determined that the amendments will not have federalism implications requiring the preparation of a Federalism Assessment.

International Civil Aviation Organization and Joint Aviation Regulations

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to comply with ICAO Standards and Recommended Practices (SARP) to the maximum extent practicable. This final rule will not present any differences with those standards.

In addition, these amendments are similar to those found in the JAR, though those regulations are less specific. JAR–OPS 1.780 addresses that PBE units must provide a 15-minute breathing supply for both flight crewmember and cabin crewmembers.

Paperwork Reduction Act

In accordance with the Paperwork Reduction Act of 1980 (Pub. L. 92–511), there are no requirements for information collection associated with this rule.

Conclusion

For the reasons discussed in the preamble, and based on the findings in the Regulatory Flexibility Determination and the International Trade Impact Assessment, the FAA has determined that this regulation is not a significant regulatory action under Executive Order 12866 since it will not impose any additional costs. In addition, the FAA has determined that this action is not significant under Department of Transportation (DOT) Regulatory Policies and Procedures (44 FR 11034; February 26, 1979).

The rule will have no impact on trade opportunities for U.S. firms doing business overseas or for foreign firms doing business in the United States.

This regulation will have no additional economic impact on the public. In fact, in the case of cargo-only operators, the rule will relieve costs. The FAA has determined that the expected impact of the rule is so minimal that it does not warrant a full Regulatory Evaluation.

The Amendment

In consideration of the foregoing, the Federal Aviation Administration amends Title 14 of the Code of Federal Regulations part 121 (14 CFR part 121) effective September 25, 1996.

The authority citation for part 121 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 40119, 44101, 44701–44702, 44705, 44709–44711, 44713, 44716–44717, 44722, 44901, 44903–44904, 44912, 46105.

SUMMARY: The FAA is amending parts 21, 25, 91, 119, 121, 125, and 135 to correct errors, make terminology consistent, or clarify the intent of the regulations published on December 20, 1995 (60 FR 65832). A few changes are to clarify existing rules or to deal with other long-standing exemptions. A new Special Federal Aviation Regulation is being issued to address three problems that relate to compliance with requirements for communications facilities and aircraft dispatchers by operators in Alaska and other areas.

FOR FURTHER INFORMATION CONTACT: Katherine Hakala, Flight Standards Service (AFS), Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone (202) 267–8166 or 267–3760.

SUPPLEMENTARY INFORMATION:

Availability of the Final Rule

An electronic copy of this document may be downloaded using a modem and suitable communications software from the FAA regulations section of the Fedworld electronic bulletin board service (telephone: 703–321–3339) or the Federal Register's electronic bulletin board service (telephone: 202–512–1661).

Internet users may reach the FAA's web page at http://www.faa.gov or the Federal Register's webpage at http://www.access.gpo.gov/su__docs for access to recently published rulemaking documents.

Any person may obtain a copy of this final rule by mail by submitting a request to the Federal Aviation Administration, Office of Rulemaking, 800 Independence Avenue, SW., Washington, DC 20591, or by calling (202) 267–9677. Communications must identify the docket number of this final rule.

Persons interested in being placed on the mailing list for future NPRM's should request from the FAA's Office of Rulemaking a copy of Advisory Circular No. 11–2A, Notice of Proposed Rulemaking Distribution System, that describes the application procedure.

Background

On December 20, 1995, new part 119, Certification: Air Carriers and Commercial Operators, was published in the *Federal Register* (60 FR 65832; December 20, 1995). Part 119 reorganizes, into one part, certification and operations specifications requirements that formerly existed in SFAR 38–2 and in parts 121 and 135. The final rule for new part 119 also deleted or changed certain sections in part 121, subparts A through D, and part 135, subpart A, because the requirements in those subparts have been recodified in part 119. On January 26, 1996, another final rule was published (61 FR 2608) affecting parts 119, 121, and 135. That amendment made editorial and terminology changes in the remaining subparts of parts 121 and 135 to conform those parts to the language of part 119 and to make certain other changes. Additional documents making editorial changes and corrections were published on March 11, 1996 (61 FR 9612), and June 14, 1996 (61 FR 30432).

Part 119 was issued as part of a large rulemaking effort, known as the "commuter rule," to upgrade the requirements that apply to scheduled operations conducted in airplanes that have a passenger seat configuration of 10 to 30 passengers. As of March 20, 1997, these operations will be conducted under the requirements of part 121, in accordance with the final rule published on December 20, 1995.

Notice of Proposed Rulemaking

On February 3, 1997, the FAA published an NPRM (62 FR 5076; Notice No. 97–1) proposing changes to correct errors, make terminology consistent, clarify the intent of part 119 and the commuter rule published on December 20, 1995, as well as make other minor changes not directly related to the commuter rule. These proposed changes are considered important because, as a result of the implementation of part 119 and the completion of the transition process for commuter operations affected by the final rule, a number of questions of interpretation have been raised and errors in previous final rules

The FAA received 19 comments in response to Notice No. 97–1. Comments were received from operators affected by the proposed rule, aircraft dispatchers, industry associations, and a manufacturer of communications system. Many commenters stressed the importance of having the final rule issued before March 20, 1997, when the majority of the commuter rule provisions go into effect. Other specific comments are summarized in the following section-by-section discussion of the final rule, which includes the FAA's responses to these comments.

Explanation of Amendments

A number of changes are necessary in parts 21, 25, 91, 119, 121, 125, and 135 to correct typographical errors, to make minor editorial changes that help clarify the intent of the rules, or to make editorial changes that make related rules consistent with each other. These types of changes are not individually explained. However, a number of changes require some explanation, which follows:

1. The proposal revised the definitions of "on-demand operation," "scheduled operation," and "supplemental operation" in § 119.3 to make it clear that public charter operations conducted under 14 CFR part 380 are not considered scheduled operations.

No comments were received on the proposed definitions and the changes to § 119.3 are adopted as proposed.

2. The proposal amended § 119.5 to add new paragraph (k), which incorporated former § 135.31 into part 119. As proposed, this section prohibited advertising or otherwise offering to perform any operation unauthorized by the FAA, and it was applicable to any person, including certificate holders operating under part 121, as well as those operating under part 135.

The proposal also added § 119.5(l) which stated that, for safety purposes, people who operate aircraft under parts 121 and 135 must comply with the provisions in a certificate holder's operations specifications. This paragraph was proposed to prevent an employee of a certificate holder (with or without other certificate holder's knowledge) from violating the provisions of the certificate holder's operations specifications. For example, if a certificate holder is only authorized to carry cargo, a flight crewmember would not be allowed to bring along a friend as a passenger on the commercial flight.

No comments were received on these proposals and the changes to § 119.5 are adopted as proposed.

3. The proposal amended § 119.9 to allow displaying the air carrier or operating certificate number on an aircraft instead of the name of the certificate holder. As described in the NPRM, a petition by the National Air Transportation Association (NATA) and supporting comments requested that, for security and financial reasons, operators be allowed to display the air carrier or operating certificate number in lieu of the name of the certificate holder. In the NPRM, the FAA agreed that display of an air carrier or operating certificate number would meet the intent of this requirement, which is to provide a ready means of identifying a responsible certificate holder when an aircraft is parked and the FAA has reason to identify or contact the certificate holder. Therefore, the FAA proposed to amend § 119.9(b)(4) as requested by NATA.

The proposal also deleted the provision allowing the Assistant Administrator for Civil Aviation Security to grant deviations from the requirements of this section because the FAA no longer believed that these deviations were necessary.

NATA, Helicopter Association International (HAI), and individual operators affected by the proposed change to § 119.9(b) comment in support of allowing part 135 operators to display their air carrier or operating certificate number on an aircraft instead of the name of the certificate holder. Commenters emphasize that, if the FAA adopts the proposed amendment, it is imperative to make the amendment effective before March 20, 1997, so that they will not need to apply the certificate holder's name temporarily on the aircraft, and then remove it when the amendment takes effect later. One operator comments that even having the operating certificate number on the aircraft creates a security risk for some customers.

No comments were received on the proposal and the changes to § 119.21 are adopted as proposed.

5. The proposal amended § 119.35 to clarify that the additional financial and contract reporting requirements of this section apply only to commercial operators. The proposal split § 119.35 into two sections: Proposed § 119.35 contained just the certificate application procedures that apply to all applicants, and new § 119.36 contained the additional requirements for commercial operators.

In the NPRM, the FAA proposed that § 119.36 distinguish between requirements for all commercial operators and those applicable only to commercial operators under part 121. In addition, the FAA proposed to delete the financial reporting requirements of § 135.64(b), but to retain the contract retention requirements in § 135.64(a).

No comments were received on the proposal and §§ 119.35 and 119.36 are adopted as proposed.

6. The proposal revised § 119.67(c) and (d) to amend the qualification requirements applicable to Directors of Maintenance and Chief Inspectors under part 121. The proposal also revised § 119.71(e) to amend the qualification and experience requirements applicable to the Director of Maintenance under part 135.

Both proposals established requirements for a person becoming the Director of Maintenance or Chief Inspector for the first time. These proposals were designed to ensure that persons holding these required management positions have the measure of experience and the demonstrated capability of effectively managing these programs.

The FAA proposed that, under §§ 119.67(c)(1) and 119.71(e)(1), the Director of Maintenance must have held the airframe and powerplant ratings for 3 years.

The proposal also amended § 119.67(c)(2) by changing the existing 1 year of maintenance experience in a supervisory capacity in maintaining the category and class of airplane used by the certificate holder, to 3 years of supervisory experience within the last 6 years in a position that exercised operational control over maintenance program functions.

In addition, the proposal amended § 119.67(c)(4)(i)(B) by replacing the word "repairing" with the word "maintaining", as the latter is consistent with the definition of maintenance as defined in 14 CFR 1.1. In addition, the word "maintaining" reflects the broader experience level more appropriate to the Director position.

For the Chief Inspector position, the proposal changed § 119.67(d)(2) to require 3 years of supervisory or managerial experience within the last 6 years.

The proposal also revised § 119.67(e) to clarify that certificate holders may request a deviation from the experience requirements of the section, but not from the airman certificate requirements of the section. Therefore, a certificate holder would not be allowed to employ a person who does not hold the required airman certificate (e.g., ATP certificate, commercial pilot certificate, mechanic certificate).

Proposed § 119.71 contained the management qualification requirements that formerly appeared in § 135.39. Section 119.71(b) and (d) required that the Director of Operations and the Chief Pilot, respectively, must hold at least a commercial pilot certificate with an instrument rating. However, under former § 135.39 the instrument rating was required only if any pilot in command for that certificate holder was required to have an instrument rating. For operations such as a VFR only helicopter operation, the pilot in command is not required to hold an instrument rating. Therefore the FAA proposed that § 119.71(b) and (d) be revised to match the intent of former § 135.39.

HAI comments in support of the proposed amendment of § 119.71(b) and (d) on behalf its membership, which includes a substantial number of VFR-only helicopter operations. HAI states that without the amendment to § 119.71(b) and (d) many operators would be forced to suspend operations until personnel that meet the current requirements can be identified and hired, and that there may not be enough such

in a future rulemaking.

7. In the NPRM, the FAA proposed that a new Special Federal Aviation Regulation (SFAR) be added to part 121 to address two problems that relate to compliance with § 121.99 and a third problem that relates to compliance with § 121.395. These are outlined below.

(1) The first problem involves certain communications difficulties in Alaska and other areas affecting certificate holders who are required by § 121.99 to "show that a two-way air/ground communication system is available at all points that will ensure reliable and rapid communications under normal operating conditions over the entire route (either direct or via approved point to point circuits) between each airplane and the appropriate dispatch office and between each airplane and the appropriate air traffic control unit."

The NPRM pointed out that, in certain areas, the lack of infrastructure or appropriate technology has prevented certificate holders from establishing such systems. For other certificate holders, the nature of their operations (e.g., flying at low altitudes or in mountainous terrain) has prevented them from using current communication systems that may be reliable only at higher altitudes.

If a certificate holder shows to the Administrator that communications gaps exist due to such reasons as lack of infrastructure, ATC operating restrictions, the terrain, operating altitude, or feasibility of a certain kind of communications system, the certificate holder would be allowed to continue to operate over that route if the certificate holder establishes alternative procedures for prompt re-establishment of communication, for establishment that the airplane arrived at its destination, and for flight locating purposes. Under the SFAR, relief would only be granted after the certificate holder shows that it would meet the requirements to the maximum extent possible. In granting such approval, the Administrator would consider certain factors that are listed in the SFAR.

Under the proposed SFAR, the certificate holder would obtain the approval of the Administrator in its operations specifications. The requests will be processed through the certificate-holding district office, with concurrence by the FAA's Air Transportation Division (AFS–200). This type of alternative compliance approval would only be available for scheduled operations with airplanes having a passenger-seat configuration of 30 seats of fewer, excluding each crewmember seat, and a payload capacity of 7,500 pounds of less under part 121 of this chapter.

(2) The second § 121.99-related problem involves certificate holders who have conducted or who might in the future conduct scheduled intrastate operations in Alaska. Under the pre-commuter rule amendments these operations operated under the rules applicable to flag air carriers and thus, under the last sentence of § 121.99, were not prohibited from using a communications system operated by the United States. For certificate holders operating intrastate in Alaska, whether certificated before or after January 19, 1996, it was considered impractical at that time to mandate that the required communications systems be independent of any system operated by the United States.

Therefore even though these certificate holders would otherwise have been required to comply with the operating rules for domestic operations, under the proposed SFAR they would be allowed to use systems operated by the United States, when there is no practical alternative, for the 4-year effective period of the SFAR. The FAA further proposed to amend § 121.99 to require that, concurrent with the expiration of the SFAR, all flag operations in Alaska, not just those affected by the commuter rule change mentioned above, have communications systems that are independent of any system operated by the United States.

(3) The third issue addressed by the proposed SFAR relates to the use of aircraft dispatchers by former commuter operations in Alaska who are required by the commuter rule to have a part 121 dispatch system. It is long-standing FAA policy that each certificate holder subject to § 121.395 have aircraft dispatchers that are employed exclusively by that certificate holder. However, small operations located in remote areas have found it hard to attract qualified, certificated aircraft dispatchers to work and live in those areas.

within that time.

Several commenters address the provisions in the proposed SFAR. The Air Transport Association (ATA) sees no reason why the SFAR should be so restrictive and limited to commuter operations, because from a safety standpoint, larger aircraft have greater fuel capacity and alternate airport capability, and generally have a larger safety margin built in than small commuter aircraft. NATA believes that the proposed SFAR does not adequately address the special nature of flight operations in rural Alaskan areas, because the inherent problem is that Alaska simply does not have the infrastructure to guarantee communications in remote areas. Also NATA believes that operations in designated remote areas, where flights are mainly VFR, flight plans frequently change, and airports are often unattended, should not be subjected to the same stringent dispatching requirements applied to other part 121 operations. An aeronautical communications company disagrees with FAA's statements on lack of infrastructure and availability of appropriate technology. This commenter believes that there is a wide variety of choices available to meet the communication needs for positive operational control and that operators in remote geographical areas may need to make a combination of choices to allow them to meet the requirements of the current rules.

The Airline Dispatchers Federation (ADF) and an individual aircraft dispatcher address the relationship between the communications system required by § 121.99 and the role of the aircraft dispatcher in providing information that may affect the safety of the flight to the pilot in command. ADF believes that adequate air ground communication technology is available for Alaskan operations, but that if there is a lack of weather reporting along their routes, air carriers can provide station and other personnel with telephone, dial access radio, HF, VHF, or SatComm communications and provide them with the training to provide accurate weather and aerodrome information. ADF further suggests that Alaskan air carriers cooperate to build their own radio network to cover their routes or that the State of Alaska may want to help finance any additional infrastructure required for scheduled air service in Alaska.

ADF suggests that Alaskan pilots, operating under a "bush" mentality, have knowingly flown in IMC or VFR flights in response to operational pressures, and that when adequate communication systems are in place and aircraft dispatchers are able to obtain accurate information on weather and other local conditions, the pilots will no longer be able to decide on their own whether or not to initiate or continue a particular flight, because, if the information does not show the operation can be conducted safely, the dispatcher may not authorize the flight.

ADF and the aircraft dispatcher object to FAA's proposal to allow Alaskan air carriers to share aircraft dispatchers under certain conditions. The commenters fear that a dispatcher working under contract or exercising operational control on a competitor's flight may have his or her actions second-guessed by the management of the other airline. ADF comments that a shared dispatcher may be kept at a distance from the operations and only told what company employees want the dispatcher to know.

ADF and the dispatcher believe that part 135 operators who have faced the challenge of complying with the communications and dispatching rules of part 121 should be commended and not effectively penalized economically by competitors who take advantage of the provisions in the proposed SFAR.

After careful consideration of these comments, the FAA has decided to issue the SFAR as proposed. The FAA disagrees with ATA's assertion that the SFAR should also apply to air carriers operating larger planes, but instead agrees with ADF that the rules in part 121 requiring adequate communications systems and a full aircraft dispatching system for scheduled operations have contributed for many years to a high level of safety that should be applied as well to scheduled operations affected by the commuter rule. The purpose of the SFAR is to allow the FAA, the affected commuter operators, and the communications equipment industry to work together to bring every commuter operator into compliance with part 121 as soon as possible. However, the FAA's experience in implementing the commuter rule has been that there *are* gaps in certain remote areas that could not be remedied before the March 20, 1997, deadline for implementing the commuter rule. This is the exception rather than the rule. The limited number of commuter operators who have not been able to close the communications gaps along all of their routes have been evaluating systems and trying to develop plans for complying with § 121.99.

such regulatory distinctions as the Administrator considers appropriate. Also, in implementing the commuter rule, the FAA has found that in the unique environment of Alaska, it is difficult to recruit and retain qualified certificated aircraft dispatchers. The commenters' fears about the potential for contract dispatchers or dispatchers exercising operational control over competitors' flights are unwarranted because the SFAR allows for the sharing of dispatchers by 2 companies, not for the contracting out of dispatching services. The 2 companies would be authorized to share a dispatcher only when the companies can show to the FAA that they have joint plans for complying with the dispatcher training and qualification rules and that the number of flights for which the dispatcher would be responsible would not be beyond the capacity of a single dispatcher.

The FAA does not think that authority to operate under the SFAR would provide an economic advantage to a commuter operator because the authority will be granted in a very limited number of cases and only when the operator has shown to the FAA that it is proceeding on a plan and has a schedule for coming into full compliance with the part 121 rules within 4 years.

8. The proposal amended § 121.99 to allow for "other means of communication approved by the Administrator" as an alternative to the two-way radio communication system required by that section. This would allow certificate holders to use other types of technology, such as datalink or telephonic communication systems, to comply with this section.

No comments were received on the proposal and the changes to § 121.99 are adopted as proposed.

9. The proposal amended the manual requirements in §§ 121.137, 121.139, 125.71, 135.21, and 135.427 to make these sections compatible with § 121.133. (Section 121.133 had been revised in the commuter rule to allow a certificate holder to prepare its maintenance manual in any form acceptable to the Administrator.) Therefore, the FAA proposed in the NPRM to include the language "any form acceptable to the Administrator" in the sections above.

The proposal also amended these sections to clarify that, regardless of the form of the maintenance manual, it must be retrievable in the English language. Certificate holders who purchase equipment from foreign manufacturers or previous foreign owners must ensure that the maintenance instructions to be followed by their employees and reviewed by the FAA are in English.

No comments were received on the proposal and the changes to the manual requirements are adopted as proposed.

10. The proposal revised § 121.305(j) to clarify the requirements for third attitude indicators for turbopropeller-powered airplanes having a passenger seat configuration of 30 seats or fewer and turbopropeller-powered airplanes with more than 30 seats. The latter have been required to have third attitude indicators since October 1994.

No comments were received on the proposal and the changes to § 121.305 are adopted as proposed.

11. The FAA proposed to allow 2 years from the date of the final rule for the affected operators to install emergency exit locating signs that comply with § 121.310(b)(1). The additional 2 years for compliance would be granted to both in-service 10–19 seat airplanes and newly manufactured 10–19 seat airplanes. Paragraph (b)(1) of § 121.310 requires that the identity and location of each passenger emergency exit must be marked so that the exit is recognizable from a distance equal to the width of the cabin and that the location of the exit must be indicated by a sign visible to occupants approaching along the main passenger aisle. Paragraph (b)(1)(i) requires that one of the locating signs must be on the ceiling of the cabin. Because of limited headroom, most of the 10–19 seat airplanes used by operators subject to the commuter rule do not have locating signs on the ceiling, but have been allowed to use two-dimensional signs mounted flush to the cabin sidewalls. For these 10–19 seat airplanes with limited headroom, the simplest means of complying may be to replace the two-dimensional signs with beveled or three-dimensional signs that can be read easily at the cabin extremes; that type of sign would function to both identify and locate the corresponding exit.

12. The proposal amended § 121.133(c) to correct an omission concerning the use of quick-donning oxygen masks at flight levels above 250 as a substitute for having one pilot at the controls wear and use an oxygen mask at all times. For pressurized turbine engine powered airplanes, § 121.333(c) has allowed the availability of a quick-donning mask to be a substitute for wearing and using a mask at all times at or below flight level 410. However, under § 135.89(b)(3) at least one pilot at the controls of a pressurized airplane is required at altitudes above flight level 350 to wear and use an oxygen mask at all times.

For those 10–30 passenger airplanes that will be operating under part 121 as a result of the commuter rule amendments, the proposal stated that flight level 350 rather than flight level 410 would continue to be the appropriate altitude at which at least one pilot at the controls would be required to wear an oxygen mask at all times.

Since the commuter rule was not intended to relax this requirement, the FAA proposed to amend § 121.333(c) to incorporate the requirements of § 135.89(b)(3) for airplanes with less than 31 seats, excluding any required crewmember seat, and a payload capacity of 7,500 pounds or less.

No comments were received on the proposal and the changes to § 121.333 are adopted as proposed.

13. The proposal amended § 121.437 to eliminate a redundancy that was created by an earlier corrective amendment and by adding a new sentence that would have the effect of codifying an existing exemption that had been in effect since 1980.

The FAA granted the ATA an exemption from § 121.437 (Exemption No. 2965), allowing a pilot employed by a part 121 certificate holder as a flight crewmember to be issued additional category and class ratings to the pilot's certificate if the pilot had satisfactorily completed the appropriate training requirements of subpart N and the proficiency check requirements of § 121.441 by presenting proof of this to the Administrator. This exemption was extended 9 times and is due to expire on July 31, 1997.

Over the 16 years that the exemption has been in effect, there has been no known derogation of safety. Therefore, since the FAA has not had the resources to conduct each proficiency check required by the rule, the FAA proposed to codify Exemption 2965 into § 121.437.

ATA supports the proposed changes to § 121.437 and adds that codifying the exemption will also reduce the administrative burden on both the airlines and the FAA. The final rule is adopted as proposed.

Tables 1–4 From the Commuter Rule

In the preamble of the NPRM for this final rule, the FAA corrected and republished 3 tables that were a part of the original commuter rule preamble: Table 2, *Comparable Sections in Parts 121 and 135*, and Tables 3 and 4, the Derivation and Distribution Tables for part 119. There have been no changes to these informational tables since the NPRM was published (February 3, 1997; 62 FR 5076). The FAA is in the process of updating Table 1, *Summary of New Equipment and Performance Modifications for Affected Commuters*, originally published in the commuter rule, to present the delayed compliance dates for the equipment and performance modifications required by the commuter rule and subsequent amendments.

Any person may obtain a copy of Tables 1–4 by mail by submitting a request to: Linda Williams, Federal Aviation Administration, Office of Rulemaking, 800 Independence Avenue, SW., Washington, DC 20591, or by calling (202) 267–9685.

Federalism Implications

The regulations herein do not have substantial direct effects on the states, on the relationship between national government and the states, or on the distribution of power and responsibilities among various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

on the public, I find that the amendment should be made effective in less than 30 days after publication. Therefore, this final rule is effective as of the date of issuance.

Conclusion

The FAA has determined that this final rule imposes no additional burden on any person. Accordingly, it has been determined that the action: (1) Is not a significant rule under Executive Order 12866; and (2) is not a significant rule under Department of Transportation Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). No cost impact is expected to result and a full regulatory evaluation is not required. In addition, the FAA certifies that the final rule will not have a significant cost impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

Adoption of Amendments

Accordingly, the Federal Aviation Administration (FAA) amends 14 CFR parts 21, 25, 91, 119, 121, 125, and 135 effective March 12, 1997.

The authority citation for part 121 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 40119, 44101, 44701–44702, 44705, 44709–44711, 44713, 44716–44717, 44722, 44901, 44903–44904, 44912, 46105.

Amendment 121–263

Aircraft Flight Simulator Use in Pilot Training, Testing, and Checking and at Training Centers; Editorial and Other Changes

Adopted: March 18, 1997 **Effective: March 21, 1997**

(Published in 62 FR 13788, March 21, 1997)
(Corrected in 62 FR 16892, April 8, 1997)

SUMMARY: This amendment makes minor revisions to correct editorial errors. It also revises certain sections of regulations published on July 2, 1996 (61 FR 34508), to make them consistent with the intent expressed in the notice and final rule. These amendments will not impose any additional restrictions on persons affected by these regulations. This final rule implements new regulations that contain certification and operating rules for training centers that will use aircraft flight simulators and flight training devices for pilot training, testing, and checking.

FOR FURTHER INFORMATION CONTACT: Warren Robbins, Airman Certification Branch (AFS–840), General Aviation and Commercial Division, Flight Standards Service, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone (202) 267–3842.

SUPPLEMENTARY INFORMATION:

Background

On July 2, 1996, a final rule was published that implements new regulations containing certification and operating rules for training centers that will use aircraft flight simulators and flight training devices for pilot training, testing, and checking (61 FR 34508). The training center concept is intended to provide a common source for standardized, quality training accessible to any individual or corporate operator and air carriers.

Paragraph (b), as amended, adds language that allows devices previously referred to as ground trainers and pilot trainers to continue to be used to meet various requirements of §§ 61.56, 61.57, 61.65, and 61.129, to the extent of their original approval. This was clearly the intent expressed in the preamble to the final rule.

It should be noted that, under revised paragraph (b), only devices qualified under Advisory Circular (AC) 61–66, "Annual Pilot in Command Proficiency Checks" (superseded) may continue to be used to satisfy requirements of § 61.56. All other such devices, to be defined as Level 1 Flight Training Devices in AC 120–45B, may be used only for the purpose and number of credited hours for which they had received acceptance or approval for use prior to August 2, 1996. Any such device must be shown to function as originally designed for the original approval to be valid. To be used for a different purpose or any additional credit, each training device will have to meet § 61.4(a) and the implementing criteria in effect at the time.

Paragraph (c), as amended, adds clarifying language consistent with the FAA's intent to allow, and continue to allow, certain devices not qualified as a flight simulator or a flight training device to be used for specific training, testing, or checking.

§ 61.51 Pilot Logbooks

Paragraph (c)(2)(i) is revised to add words indicating that when the pilot is "the sole occupant of the aircraft," he or she is the pilot in command of that aircraft. Removal of this language was not intended to preclude such a pilot from logging this time as pilot in command. This restores language that appeared in the rule prior to Amendment 61–100, to avoid misinterpretation.

§ 61.55 Second-in-Command Qualifications

This section is amended to correct an editorial error. Under paragraph (b)(3) the words "the requirements of this paragraph (b)(3)" are changed to read "the requirements of paragraph (b)(2)" to provide the correct reference.

§ 61.56 Flight Review

This section is amended by redesignating paragraph (e) as paragraph (d), and by reinstating paragraph (e) as it was amended by Amendment 61–93 (58 FR 40562, July 28, 1993), subsequent to publication of the Notice of Proposed Rulemaking (NPRM) that led to Amendment 61–100. This amendment aligns the paragraph numbers to agree with the 1993 structure, and continues the 1993 provision that a pilot who completes in the same timeframe a phase of the FAA-sponsored pilot proficiency awards program (i.e., WINGS Program) in an aircraft need not accomplish a biennial flight review.

§ 61.57 Recent Flight Experience: Pilot in Command

This section currently requires that persons pass an instrument competency test in the category and class of aircraft involved. This section is amended to delete the words "and class" which were inadvertently inserted in paragraph (e)(2) in the NPRM. Although the addition of "and class" may be appropriate in other provisions, the FAA did not intend to propose that the instrument competency check be taken in specific class of aircraft. Instrument operations with various classes of the same category are not sufficiently distinct to warrant separate tests for each class.

§ 61.64 Additional Aircraft Ratings for Other Than Airline Transport Pilot Certificates (For Other Than Parts 121 and 135 Use)

This section is amended by revising paragraph (b)(2), deleting paragraph (c)(2), and renumbering paragraph (c)(3) as paragraph (c)(2). Paragraph (b)(2), as revised, will reinstate the provision that the holder of a category rating for a powered aircraft will not have to take a knowledge test for an additional category rating. Paragraph (c)(2) incorrectly required applicants for an added class rating to take a knowledge test. These revisions correct language that was used in the NPRM and Amendment 61–100, although

prior to the phrase "category, class, and type aircraft that is certified for flight in instrument conditions." Allowing the use of any category, class, and type of aircraft during the practical test (e.g., a helicopter being used for an airplane instrument rating practical test) would not adequately establish the applicant's qualifications.

Further under paragraph (g)(1), the phrase "that is certified for flight in instrument conditions" should not have been added. This wording unintentionally precludes practical testing in some aircraft that may not be certified for flight into instrument meteorological conditions but which may be operated under instrument flight rules in visual meteorological conditions (i.e., the flight is not conducted in weather conditions that are less than minimums required for visual flight rules). Therefore, this wording has been deleted.

Under paragraph (g)(2) the words "required by this paragraph (g)(2)" are not needed and are therefore deleted.

§ 61.109 Airplane Rating: Aeronautical Experience

This section is amended to correct an editorial error. A typographical error that occurred when this final rule was printed rendered paragraph (f) as paragraph (h). Therefore, paragraph (h) should be redesignated as paragraph (f).

§ 61.129 Airplane Rating: Aeronautical Experience

Paragraph (b) is revised to correct an error in formatting that raised confusion as to whether the aeronautical experience provision of 100 hours of pilot time in an airplane and the provisions that break down that aeronautical experience requirement had been removed. Such a revision was not proposed and was never intended. This experience is necessary to ensure that the U.S. commercial pilot certificate meets International Civil Aviation Organization (ICAO) standards. The amended paragraph (b) avoids any confusion.

§ 61.157 Airplane Rating: Aeronautical Skill (For Parts 121 and 135 Use Only)

Paragraph (g) is revised to clarify that completion of an air carrier pilot-in-command proficiency check satisfies the requirement for demonstration of aeronautical skill only when the check is evaluated by a designated examiner or FAA inspector, and only when the check includes all maneuvers and procedures which are required for the original type rating. This has been the FAA's long standing interpretation of similar language in the flush paragraph which appears at the end of § 121.441(a), which states "The satisfactory completion of a type rating flight check under § 61.157 of this chapter satisfies the requirement for a proficiency check." The intent, that a pilot-in-command proficiency check under these conditions satisfies the demonstration of aeronautical skill for a type rating, should be stated under § 61.157(g), not in § 121.441. Therefore, this action will also amend § 121.441 to delete that redundant flush paragraph.

§ 61.197 Renewal of Flight Instructor Certificates

Paragraph (b) is revised to reinstate Amendment 61–95 (59 FR 17644, April 13, 1994) that eliminated the requirement for 24 hours of ground and flight training for a flight instructor refresher clinic. The 24 hour requirement had been erroneously reinserted by Amendment 61–100 (61 FR 34508). The revised paragraph will also allow any authorized Flight Standards Inspector to renew a flight instructor certificate. The paragraph is also revised to state that an applicant who is an instructor or evaluator of a part 142 Training Center may renew a flight instructor certificate, without the applicant accomplishing a practical test. This addition makes explicit one kind of "comparable position involving the regular evaluation of pilots." Further, language has been added to this section explicitly stating that application for renewal must be made prior to the expiration date of a current flight instructor certificate. This always has been implied by this section.

Paragraph (a)(2) is revised to change the reference from "§§ 121.411 and 121.413" to "§§ 121.411 through 121.414." Also, § 135.324 (Training Program: Special Rules) is amended by revising paragraph (b)(4) to change the reference from "§§ 135.337 or 135.339" to "§§ 135.337 through 135.340." These two sections need to be amended in order to be consistent with the June 17, 1996 Amendment Nos. 121–257 and 135–64 (61 FR 30734) that added new sections to parts 121 and 135 regarding qualifications, and initial and transition training and checking requirements for flight instructors.

Part 142

§ 142.11 Application for Issuance or Amendment

This section is amended by deleting paragraph (e)(4) and redesignating paragraph (e)(5) as paragraph (e)(4). Paragraph (e)(4), as adopted, referred to § 142.21; however, because § 142.21 was a reserved section, reference made to it under § 142.11 is erroneous.

§ 142.53 Training Center Instructor Training and Testing Requirements

This section is amended by inserting in paragraph (a)(7)(ii) the words "of a representative segment of each curriculum" This insertion is needed to preclude confusion that might result from an interpretation that instructor testing must include all maneuvers, in apparent contradiction with paragraph (a)(1), which specifies that only a representative segment of each curriculum must be checked.

Federalism Implications

The regulations do not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among various levels of government. Thus, in accordance with Executive Order 12612, it is determined that such a regulation does not have federalism implications warranting the preparation of a Federalism Assessment.

Paperwork Reduction Act

The information collection requirements associated with this rule have already been approved. There are no further paperwork requirements associated with this correction.

Good Cause Justification for Immediate Adoption

This amendment is needed to make editorial corrections and minor clarifying revisions. Because the amendment is editorial in nature and would impose no additional burden on the public, I find that notice and opportunity for public comment before adopting this amendment is unnecessary, and that good cause exists for making this amendment effective in less than 30 days.

Conclusion

The FAA has determined that this regulation imposes no additional burden on any person. Accordingly, it has been determined that the action: (1) Is not a significant rule under Executive Order 12866; and (2) is not a significant rule under Department of Transportation Regulatory Policy and Procedures (44 FR 11034, February 26, 1979). Also, because this regulation is editorial in nature, no impact is expected to result, and a full regulatory evaluation is not required. In addition, the FAA certifies that the rule will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

The Amendments

In consideration of the foregoing, the Federal Aviation Administration amends 14 CFR parts 61, 121, 135, and 142 effective March 21, 1997.

Part 121—Operating Requirements: Domestic, Flag, and Supplemental Operations
Subpart A—General

§ 121.1 Applicability.

[This part prescribes rules governing—

[(a) The domestic, flag, and supplemental operations of each person who holds or is required to hold an Air Carrier Certificate or Operating Certificate under part 119 of this chapter.

[(b) Each person employed or used by a certificate holder conducting operations under this part including maintenance, preventive maintenance, and alteration of aircraft.

[(c) Each person who applies for provisional approval of an Advanced Qualification Program curriculum, curriculum segment, or portion of a curriculum segment under SFAR No. 58, 14 CFR part 121, and each person employed or used by an air carrier or commercial operator under this part to perform training, qualification, or evaluation functions under an Advanced Qualification Program under SFAR No. 58, 14 CFR part 121.

[(d) Nonstop sightseeing flights conducted with airplanes having a passenger-seat configuration of 30 seats or fewer and a maximum payload capacity of 7,500 pounds or less that begin and end at the same airport, and are conducted within a 25 statute mile radius of that airport; however, except for operations subject to SFAR 50–2, 14 CFR part 121, these operations, when conducted for compensation or hire, must comply only with §§ 121.455 and 121.457, except that an operator who does not hold an air carrier certificate or an operating certificate is permitted to use a person who is otherwise authorized to perform aircraft maintenance or preventive maintenance duties and who is not subject to FAA-approved anti-drug and alcohol misuse prevention programs to perform—

(1) Aircraft maintenance or preventive maintenance on the operator's aircraft if the operator would otherwise be required to transport the aircraft more than 50 nautical miles further than the repair point closest to the operator's principal base of operations to obtain these services; or

(2) Emergency repairs on the operator's aircraft if the aircraft cannot be safely operated to a location where an employee subject to FAA-approved programs can perform the repairs.

[(e) Each person who is on board an aircraft being operated under this part.

[(f) Each person who is an applicant for an Air Carrier Certificate or an Operating Certificate under part 119 of this chapter, when conducting proving tests.]

(Amdt. 121–3, Eff. 4/1/65); (Amdt. 121–56, Eff. 1/6/70); (Amdt. 121–67, Eff. 10/18/70); (Amdt. 121–139, Eff. 1/9/78); (Amdt. 121–160, Eff. 7/1/80) (Amdt. 121–164, Eff. 2/1/81); (Amdt. 121–206, Eff. 8/18/90); (Amdt. 121–219, Eff. 10/2/90); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.2 Compliance schedule for operators that transition to part 121; certain new entrant operators.

(a) *Applicability.* This section applies to the following:

(1) Each certificate holder that was issued an air carrier or operating certificate and operations specifications under the requirements of part 135 of this chapter or under SFAR No. 38–2 of 14 CFR part 121 before January 19, 1996, and that conducts scheduled passenger-carrying operations with:

(i) Nontransport category turbopropeller-powered airplanes type certificated after December 31, 1964, that have a passenger seat configuration of 10–19 seats;

(ii) Transport category turbopropeller-powered airplanes that have a passenger seat configuration of 20–30 seats; or

(iii) Turbojet-engine-powered airplanes having a passenger seat configuration of 1–30 seats.

(2) Each person who, after January 19, 1996, applies for or obtains an initial air carrier or operating certificate and operations specifications to conduct scheduled passenger-carrying operations in the kinds of airplanes described in para-

specifications to conduct its scheduled operations under this part on or before March 20, 1997.

(c) *Regular or accelerated compliance.* Except as provided in paragraphs (d), (e), and (i) of this section, each certificate holder described in paragraph (a)(1) of this section shall comply with each applicable requirement of this part on and after March 20, 1997, or on and after the date on which the certificate holder is issued operations specifications under this part, whichever occurs first. Except as provided in paragraphs (d) and (e) of this section, each person described in paragraph (a)(2) of this section shall comply with each applicable requirement of this part on and after the date on which that person is issued a certificate and operations specifications under this part.

(d) *Delayed compliance dates.* Unless paragraph (e) of this section specifies an earlier compliance date, no certificate holder that is covered by paragraph (a) of this section may operate an airplane in 14 CFR part 121 operations on or after a date listed in this paragraph unless that airplane meets the applicable requirement of this paragraph (d):

(1) *Nontransport category turbopropeller powered airplanes type certificated after December 31, 1964, that have a passenger seat configuration of 10–19 seats.* No certificate holder may operate under this part an airplane that is described in paragraph (a)(1)(i) of this section on or after a date listed in paragraph (d)(1) of this section unless that airplane meets the applicable requirement listed in paragraph (d)(1) of this section:

(i) December 20, 1997:

(A) Section 121.289, Landing gear aural warning.

(B) Section 121.308, Lavatory fire protection.

(C) Section 121.310(e), Emergency exit handle illumination.

(D) Section 121.337(b)(8), Protective breathing equipment.

(E) Section 121.340, Emergency flotation means.

(ii) December 20, 1999: Section 121.342, Pitot heat indication system.

(D) Section 121.312(c), Passenger seat cushion flammability.

[(iv) March 12, 1999: Section 121.310(b)(1), Interior emergency exit locating sign.]

(2) *Transport category turbopropeller powered airplanes that have a passenger seat configuration of 20–30 seats.* No certificate holder may operate under this part an airplane that is described in paragraph (a)(1)(ii) of this section on or after a date listed in paragraph (d)(2) of this section unless that airplane meets the applicable requirement listed in paragraph (d)(2) of this section:

(i) December 20, 1997:

(A) Section 121.308, Lavatory fire protection.

(B) Section 121.337(b)(8) and (9), Protective breathing equipment.

(C) Section 121.340, Emergency flotation means.

(ii) December 20, 2010: Section 121.305(j), third attitude indicator.

(e) *Newly manufactured airplanes.* No certificate holder that is described in paragraph (a) of this section may operate under this part an airplane manufactured on or after a date listed in this paragraph unless that airplane meets the applicable requirement listed in this paragraph (e).

(1) For nontransport category turbopropeller-powered airplanes type certificated after December 31, 1964, that have a passenger seat configuration of 10–19 seats:

(i) Manufactured on or after March 20, 1997:

(A) Section 121.305(j), Third attitude indicator.

(B) Section 121.311(f), Safety belts and shoulder harnesses.

(ii) Manufactured on or after December 20, 1997: Section 121.317(a), Fasten seat belt light.

(iii) Manufactured on or after December 20, 1999: Section 121.293, Takeoff warning system.

(f) *New type certification requirements.* No person may operate an airplane for which the application for a type certificate was filed after March 29, 1995, in 14 CFR part 121 operations unless that airplane is type certificated under part 25 of this chapter.

(g) *Transition plan.* Before March 19, 1996, each certificate holder described in paragraph (a)(1) of this section must submit to the FAA a transition plan (containing a calendar of events) for moving from conducting its scheduled operations under the commuter requirements of part 135 of this chapter to the requirements for domestic or flag operations under this part. Each transition plan must contain details on the following:

(1) Plans for obtaining new operations specifications authorizing domestic or flag operations;

(2) Plans for being in compliance with the applicable requirements of this part on or before March 20, 1997; and

(3) Plans for complying with the compliance date schedules contained in paragraphs (d) and (e) of this section.

(h) *Continuing requirements.* A certificate holder described in paragraph (a) of this section shall comply with the applicable airplane operating and equipment requirements of part 135 of this chapter for the airplanes described in paragraph (a)(1) of this section, until the airplane meets the specific compliance dates in paragraphs (d) and (e) of this section.

(i) *Delayed pilot age limitation:*

(1) Notwithstanding § 121.383(c), and except as provided in paragraph (i)(2) of this section, a certificate holder may use the services of a person as a pilot in operations covered by paragraph (a)(1) of this section after that person has reached his or her 60th birthday, until December 20, 1999. Notwithstanding § 121.383(c), and except as provided in paragraph (i)(2) of this section, a person may serve as a pilot in operations covered by paragraph (a)(1) of this section after that person has reached his or her 60th birthday, until December 20, 1999.

(2) This paragraph applies only to persons who were employed as pilots by a certificate holder in

of this chapter before March 20, 1997, can be annotated, with the approval of the Administrator, to reflect crewmember training and qualification credited toward part 121 requirements.

(Amdt. 121–3, Eff. 4/1/65); (Amdt. 121–139, Eff. 1/9/78); (Amdt. 121–144, Eff. 6/26/78); (Amdt. 121–192, Eff. 8/25/87); (Amdt. 121–251, Eff. 1/19/96); (Amdt. 121–253, Eff. 2/26/96); (Amdt. 121–256, Eff. 7/15/96); [(Amdt. 121–262, Eff. 3/12/97)]

§ 121.3 [Removed]

[(Amdt. 121–251, Eff. 1/19/96)]

§ 121.4 Applicability of rules to unauthorized operators.

The rules in this part which refer to a person certificated under [part 119 of this chapter] apply also to any person who engages in an operation governed by this part without the appropriate certificate and operations specifications required by [part 119 of this chapter.]

Docket No. 11675 (37 FR 20937) Eff. 10/5/72

(Amdt. 121–98, Eff. 11/4/72); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.5 [Removed]

[(Amdt. 121–251, Eff. 1/19/96)]

*§ 121.6 Leasing of aircraft.

(a) Prior to conducting operations, each certificate holder must provide the Administrator a copy or a written memorandum of the terms of any leasing arrangement whereby that certificate holder agrees to provide a large aircraft and at least a pilot flight crewmember to another person certificated under part 121, and part 123 or 135 of the Federal Aviation Regulations or engaged in the operation of a foreign air carrier or other foreign airline.

(b) Upon receiving a copy of an agreement, or a written memorandum of the terms thereof, the Administrator determines which party to the agreement is conducting the operation and issues an

(4) The areas of operation.

(5) The regulations of this chapter applicable to the operation.

(6) A statement of the economic authority, if available.

(c) In making a determination under paragraph (b) of this section, the Administrator considers the responsibility under the agreement for the following—

(1) Crewmembers and training.

(2) Airworthiness and performance of maintenance.

(3) Dispatch.

(4) Servicing the aircraft.

(5) Scheduling.

(6) Any other factor the Administrator considers relevant.

(Amdt. 121–70, Eff. 12/5/70); (Amdt. 121–95, Eff. 9/15/72); [(Amdt. 121–251, Eff. 1/19/96)]

*§ 121.6 [Removed]

[(Amdt. 121–253, Eff. 2/26/96)]

§ 121.7 [Removed]

(Amdt. 121–131, Eff. 12/9/76); [(Amdt. 121–251, Eff. 1/19/96)]

Each certificate holder shall, while operating an airplane within a foreign country, comply with the air traffic rules of the country concerned and the local airport rules, except where any rule of this part is more restrictive and may be followed without violating the rules of that country.

(Amdt. 121–143, Eff. 6/26/78)

§ 121.13 [Removed]

(Amdt. 121–50, Eff. 9/5/69); (Amdt. 121–54, Eff. 4/1/70); (Amdt. 121–61, Eff. 7/8/70); (Amdt. 121–133, Eff. 5/16/77); (Amdt. 121–147, Eff. 12/1/78); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.15 Carriage of narcotic drugs, marihuana, and depressant or stimulant drugs or substances.

[If a certificate holder operating under this part permits any aircraft owned or leased by that holder to be engaged in any operation that the certificate holder knows to be in violation of § 91.19(a) of this chapter, that operation is a basis for suspending or revoking the certificate.]

(Amdt. 121–50, Eff. 9/5/69); (Amdt. 121–78, Eff. 8/31/71); (Amdt. 121–206, Eff. 8/18/90); [(Amdt. 121–251, Eff. 1/19/96)]

Subpart E—Approval of Routes: Domestic and Flag Operations

§ 121.91 Applicability.

[This subpart prescribes rules for obtaining approval of routes by certificate holders conducting domestic or flag air operations.]

[(Amdt. 121–253, Eff. 2/26/96)]

§ 121.93 Route requirements: General.

(a) Each [certificate holder conducting domestic or flag operations] seeking a route approval must show—

(1) That it is able to conduct satisfactorily scheduled operations between each regular, provisional, and refueling airport over that route or route segment; and

(2) That the facilities and services required by §§ 121.97 through 121.107 are available and adequate for the proposed operation.

The Administrator approves a route outside of controlled airspace if he determines that traffic density is such that an adequate level of safety can be assured.

(b) Paragraph (a) of this section does not require actual flight over a route or route segment if the [certificate holder] shows that the flight is not essential to safety, considering the availability and adequacy of airports, lighting, maintenance, communication, navigation, fueling, ground, and airplane radio facilities, and the ability of the personnel to be used in the proposed operation.

(Amdt. 121–3, Eff. 4/1/65); [(Amdt. 121–253, Eff. 2/26/96)]

§ 121.95 Route width.

(a) Approved routes and route segments over U.S. Federal airways or foreign airways (and advisory routes in the case of [certificate holders conducting flag operations]) have a width equal to the designated width of those airways or routes. Whenever the Administrator finds it necessary to determine the width of other approved routes, he considers the following—

(1) Terrain clearance.

(2) Minimum en route altitudes.

(3) Ground and airborne navigation aids.

(4) Air traffic density.

(5) ATC procedures.

(b) Any route widths of other approved routes determined by the Administrator are specified in the [certificate holder's] operations specifications.

[(Amdt. 121–253, Eff. 2/26/96)]

§ 121.97 Airports: Required data.

(a) Each [certificate holder conducting domestic or flag operations] must show that each route it submits for approval has enough airports that are properly equipped and adequate for the proposed operation, considering such items as size, surface, obstructions, facilities, public protection, lighting, navigational and communication aids, and ATC.

(b) [Each certificate holder conducting domestic or flag operations] must show that it has an approved system for obtaining, maintaining, and distributing to appropriate personnel current aeronautical data for each airport it uses to ensure a safe operation at that airport. The aeronautical data must include the following—

(1) Airports.

(i) Facilities.

(ii) Public protection.

(iii) Navigational and communications aids.

(iv) Construction affecting takeoff, landing or ground operations.

(v) Air traffic facilities.

(2) Runways, clearways and stopways.

(i) Dimensions.

(ii) Surface.

(iii) Marking and lighting systems.

(iv) Elevation and gradient.

(3) Displaced thresholds.

(i) Location.

(ii) Dimensions.

(iii) Takeoff or landing or both.

(4) Obstacles.

(i) Those affecting takeoff and landing performance computations in accordance with subpart I of this part.

(ii) Controlling obstacles.

(5) Instrument flight procedures.

conditions.

(c) If the [certificate-holding district office] charged with the overall inspection of the certificate holder's operations finds that revisions are necessary for the continued adequacy of the certificate holder's system for collection, dissemination, and usage of aeronautical data that has been granted approval, the certificate holder shall, after notification by the Flight Standards District Office, make those revisions in the system. Within 30 days after the certificate holder receives such notice, the certificate holder may file a petition to reconsider the notice with the Director, Flight Standards Service. This filing of a petition to reconsider stays the notice pending a decision by the Director of Flight Operations. However, if the Flight Standards District Office finds that there is an emergency that requires immediate action in the interest of safety in air transportation, the Director, Flight Standards Service may, upon statement of the reasons, require a change effective without stay.

(Amdt. 121–162, Eff. 9/9/80); (Amdt. 121–207, Eff. 10/25/89); [(Amdt. 121–253, Eff. 2/26/96)]

§ 121.99 Communications facilities.

[(a) Each certificate holder conducting domestic or flag operations must show that a two-way radio communication system or other means of communication approved by the Administrator is available at points that will ensure reliable and rapid communications, under normal operating conditions over the entire route (either direct or via approved point-to-point circuits) between each airplane and the appropriate dispatch office, and between each airplane and the appropriate air traffic control unit, except as specified as § 121.351(c).

[(b) For the following types of operations, the communications systems between each airplane and the dispatch office must be independent of any system operated by the United States:

(1) All domestic operations;

(2) Flag operations in the 48 contiguous States and the District of Columbia; and

(a) Each [certificate holder conducting domestic or flag operations] must show that enough weather reporting services are available along each route to ensure weather reports and forecasts necessary for the operation.

(b) Except as provided in paragraph (d) of this section, no [certificate holder conducting domestic or flag operations] may use any weather report to control flight unless—

(1) For operations within the 48 contiguous States and the District of Columbia, it was prepared by the U.S. National Weather Service or a source approved by the U.S. National Weather Service; or

(2) For operations conducted outside the 48 contiguous States and the District of Columbia, it was prepared by a source approved by the Administrator.

(c) Each [certificate holder conducting domestic or flag operations] that uses forecasts to control flight movements shall use forecasts prepared from weather reports specified in paragraph (b) of this section and from any source approved under its system adopted pursuant to paragraph (d) of this section.

(d) [Each certificate holder conducting domestic or flag operations] shall adopt and put into use an approved system for obtaining forecasts and reports of adverse weather phenomena, such as clear air turbulence, thunderstorms, and low altitude wind shear, that may affect safety of flight on each route to be flown and at each airport to be used.

(1) It shows that due to circumstances beyond its control it cannot comply by that date; and

(2) It has submitted by that date a schedule for compliance, acceptable to the Director, indicating that compliance will be achieved at the earliest practicable date.

(Amdt. 121–76, Eff. 7/20/71); (Amdt. 121–134, Eff. 6/30/77); [(Amdt. 121–253, Eff. 2/26/96)]

§ 121.103 En route navigational facilities.

(a) Except as provided in paragraph (b) of this section, each [certificate holder conducting domes-

ation involved.

Except for those aids required for routes to alternate airports, nonvisual ground aids required for approval of routes outside of controlled airspace are listed in the [certificate holder's] operations specifications.

(b) Nonvisual ground aids are not required for—

(1) Day VFR operations that the [certificate holder] shows can be conducted safely by pilotage because of the characteristics of the terrain;

(2) Night VFR operations on routes that the [certificate holder] shows have reliably lighted landmarks adequate for safe operation; and

(3) Operations on route segments where the use of celestial or other specialized means of navigation is approved by the Administrator.

[(Amdt. 121–253, Eff. 2/26/96)]

nance, and preventive maintenance of airplanes and auxiliary equipment.]

[(Amdt. 121–253, Eff. 2/26/96)]

§ 121.107 Dispatch centers.

[Each certificate holder conducting domestic or flag operations must show that it has enough dispatch centers, adequate for the operations to be conducted, that are located at points necessary to ensure proper operational control of each flight.]

[(Amdt. 121–253, Eff. 2/26/96)]

Subpart G—Manual Requirements

§ 121.131 Applicability.

This subpart prescribes requirements for preparing and maintaining manuals by all certificate holders.

§ 121.133 Preparation.

[(a) Each certificate holder shall prepare and keep current a manual for the use and guidance of flight, ground operations, and management personnel in conducting its operations.

[(b) For the purpose of this subpart, the certificate holder may prepare that part of the manual containing maintenance information and instructions, in whole or in part, in printed form or other form acceptable to the Administrator.]

(Amdt. 121–71, Eff. 12/7/70); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.135 Contents.

(a) Each manual required by § 121.133 must—

(1) Include instructions and information necessary to allow the personnel concerned to perform their duties and responsibilities with a high degree of safety;

(2) Be in a form that is easy to revise;

(3) Have the date of last revision on each page concerned; and

(4) [Not be contrary to any applicable Federal regulation and, in the case of a flag or supplemental operation, any applicable foreign regulation, or the certificate holder's operations specifications or operating certificate.]

(b) The manual may be in two or more separate parts, containing together all of the following information, but each part must contain that part of the information that is appropriate for each group of personnel—

(1) General policies.

(2) [Duties and responsibilities of each crewmember, appropriate members of the ground organization, and management personnel.]

(3) Reference to appropriate Federal Aviation Regulations.

(4) Flight dispatching and operational control, including procedures for coordinated dispatch or flight control or flight following procedures, as applicable.

(5) En route flight, navigation, and communication procedures, including procedures for the dispatch or release or continuance of flight if any item of equipment required for the particular type of operation becomes inoperative or unserviceable en route.

(6) [For domestic or flag operations, appropriate information from the en route operations specifications, including for each approved route the types of airplanes authorized, the type of operation such as VFR, IFR, day, night, etc., and any other pertinent information.]

(7) [For supplemental operations, appropriate information from the operations specifications, including the area of operations authorized, the types of airplanes authorized, the type of operation such as VFR, IFR, day, night, etc., and any other pertinent information.]

(8) Appropriate information from the airport operations specifications, including for each airport—

(i) [Its location (domestic and flag operations only);

(ii) [Its designation (regular, alternate, provisional, etc.) (domestic and flag operations only);

(iii) [The types of airplanes authorized (domestic and flag operations only);]

(iv) Instrument approach procedures;

(v) Landing and takeoff minimums; and

(vi) Any other pertinent information.

(9) Takeoff, en route, and landing weight limitations.

(10) Procedures for familiarizing passengers with the use of emergency equipment, during flight.

(11) Emergency equipment and procedures.

(12) The method of designating succession of command of flight crewmembers.

(13) Procedures for determining the usability of landing and takeoff areas, and for disseminat-

(16) Instructions and procedures for maintenance, preventive maintenance, and servicing.

(17) Time limitations, or standards for determining time limitations, for overhauls, inspections, and checks of airframes, engines, propellers, appliances, and emergency equipment.

(18) Procedures for refueling aircraft, eliminating fuel contamination, protection from fire (including electrostatic protection), and supervising and protecting passengers during refueling.

(19) Airworthiness inspections, including instructions covering procedures, standards, responsibilities, and authority of inspection personnel.

(20) Methods and procedures for maintaining the aircraft weight and center of gravity within approved limits.

(21) Where applicable, pilot and dispatcher route and airport qualification procedures.

(22) Accident notification procedures.

(23) [Procedures and information to assist personnel to identify packages marked or labeled as containing hazardous materials and, if these materials are to be carried, stored, or handled, procedures and instructions relating to the carriage, storage, or handling of hazardous materials, including the following:]

(i) Procedures for determining the proper shipper certification required by 49 CFR Subchapter C, proper packaging, marking, labeling, shipping documents, compatibility or materials, and instructions on the loading, storage, and handling.

(ii) Notification procedures for reporting hazardous material incidents as required by 49 CFR Subchapter C.

(iii) Instructions and procedures for the notification of the pilot in command when there are hazardous materials aboard, as required by 49 CFR Subchapter C.

(24) Other information or instructions relating to safety.

§ 121.137 Distribution and availability.

(a) Each certificate holder shall furnish copies of the manual required by § 121.133 (and the changes and additions thereto) or appropriate parts of the manual to—

(1) Its appropriate ground operations and maintenance personnel;

(2) Crewmembers; and

(3) Representatives of the Administrator assigned to it.

(b) Each person to whom a manual or appropriate parts of it are furnished under paragraph (a) of this section shall keep it up-to-date with the changes and additions furnished to that person and shall have the manual or appropriate parts of it accessible when performing assigned duties.

(c) [For the purpose of complying with paragraph (a) of this section, a certificate holder may furnish the persons listed therein the maintenance part of the manual in printed form or other form, acceptable to the Administrator, that is retrievable in the English language.]

(Amdt. 121–71, Eff. 12/7/70); (Amdt. 121–162, Eff. 9/9/80); [(Amdt. 121–262, Eff. 3/12/97)]

§ 121.139 Requirement for manual aboard aircraft: Supplemental operations.

(a) [Except is provided in paragraph (b) of this section, each certificate holder conducting supplemental operations shall carry appropriate parts of the manual on each airplane when away from the principal base of operations. The appropriate parts must be available for use by ground or flight personnel. If the certificate holder carries aboard an airplane all or any portion of the maintenance part of its manual in other than printed form, it must carry a compatible reading device that produces a legible image of the maintenance information and instructions or a system that is able to retrieve the maintenance information and instructions in the English language.]

§ 121.141 [Airplane Flight Manual.]

(a) [Each certificate holder shall keep a current approved airplane flight manual for each type of airplane that it operates except for nontransport category airplanes certificated before January 1, 1965.

(b) [In each airplane required to have an airplane flight manual in paragraph (a) of this section, the applicable flight manual if the revised operating procedures and modified performance date presentation are—

(1) Approved by the Administrator; and

(2) Clearly identified as airplane flight manual requirements.]

(Amdt. 121–97, Eff. 10/23/72); (Amdt. 121–138, Eff. 3/1/78); [(Amdt. 121–251, Eff. 1/19/96)]

Subpart K—Instrument and Equipment Requirements

§ 121.301 Applicability.

This subpart prescribes instrument and equipment requirements for all certificate holders.

§ 121.303 Airplane instruments and equipment.

(a) Unless otherwise specified, the instrument and equipment requirements of this subpart apply to all operations under this part.

(b) Instruments and equipment required by §§ 121.305 through 121.359 must be approved and installed in accordance with the airworthiness requirements applicable to them.

(c) Each airspeed indicator must be calibrated in knots, and each airspeed limitation and item of related information in the Airplane Flight Manual and pertinent placards must be expressed in knots.

(d) Except as provided in §§ 121.627(b) and 121.628, no person may take off any airplane unless the following instruments and equipment are in operable condition—

(1) Instruments and equipment required to comply with airworthiness requirements under which the airplane is type certificated and as required by §§ 121.213 through 121.283 and 121.289.

(2) Instruments and equipment specified in §§ 121.305 through [121.321, 121.359, and 121.360] for all operations, and the instruments and equipment specified in §§ 121.323 through 121.351 for the kind of operation indicated, wherever these items are not already required by paragraph (d)(1) of this section.

(Amdt. 121–44, Eff. 9/25/68); (Amdt. 121–65, Eff. 8/11/70); (Amdt. 121–114, Eff. 1/23/75); (Amdt. 121–126, Eff. 11/24/75); (Amdt. 121–122, Eff. 6/20/91); [(Amdt. 121–253, Eff. 2/26/96)]

§ 121.305 Flight and navigational equipment.

No person may operate an airplane unless it is equipped with the following flight and navigational instruments and equipment—

(a) An airspeed indicating system with heated pitot tube or equivalent means for preventing malfunctioning due to icing.

(b) A sensitive altimeter.

(c) A sweep-second hand clock (or approved equivalent).

(d) A free-air temperature indicator.

(e) A gyroscopic bank and pitch indicator (artificial horizon).

(f) A gyroscopic rate-of-turn indicator combined with an integral slip-skid indicator (turn-and-bank indicator) except that only a slip-skid indicator is required when a third attitude instrument system usable through flight attitudes of 360° of pitch and roll is installed in accordance with paragraph ([k]) of this section.

(g) A gyroscopic direction indicator (directional gyro or equivalent).

(h) A magnetic compass.

(i) A vertical speed indicator (rate-of-climb indicator).

(j) [On the airplanes described in this paragraph, in addition to two gyroscopic bank and pitch indicators (artificial horizons) for use at the pilot stations, a third such instrument is installed in accordance with paragraph (k) of this section:

(1) [On each turbojet powered airplane.

(2) [On each turbopropeller powered airplane having a passenger-seat configuration of more than 30 seats, excluding each crewmember seat, or a payload capacity of more than 7,500 pounds.

(3) [On each turbopropeller powered airplane having a passenger-seat configuration of 30 seats or fewer, excluding each crewmember seat, and a payload capacity of 7,500 pounds or less that is manufactured on or after March 20, 1997.

[(4) After December 20, 2010, on each turbopropeller powered airplane having a passenger seat configuration of 10–30 seats and a payload capacity of 7,500 pounds or less that was manufactured before March 20, 1997.]

(k) When required by paragraph (j) of this section, a third gyroscopic bank-and-pitch indicator (artificial horizon) that:

(1) Is powered from a source independent of the electrical generating system;

position acceptable to the Administrator that will make it plainly visible to and usable by each pilot at his or her station; and

(6) Is appropriately lighted during all phases of operation.

(Amdt. 121–57, Eff. 2/5/70); (Amdt. 121–60, Eff. 5/9/70); (Amdt. 121–81, Eff. 1/3/72); (Amdt. 121–130, Eff. 11/26/76); (Amdt. 121–130, Eff. 10/15/92); (Amdt 121–230, Correction Eff. 4/2/93); (Amdt. 121–251, Eff. 1/19/96); [(Amdt. 121–262, Eff. 3/12/97)]

§ 121.307 Engine instruments.

Unless the Administrator allows or requires different instrumentation for turbine-engine-powered airplanes to provide equivalent safety, no person may conduct any operation under this part without the following engine instruments—

(a) A carburetor air temperature indicator for each engine.

(b) A cylinder head temperature indicator for each air-cooled engine.

(c) A fuel pressure indicator for each engine.

(d) A fuel flowmeter or fuel mixture indicator for each engine not equipped with an automatic altitude mixture control.

(e) A means for indicating fuel quantity in each fuel tank to be used.

(f) A manifold pressure indicator for each engine.

(g) An oil pressure indicator for each engine.

(h) An oil quantity indicator for each oil tank when a transfer or separate oil reserve supply is used.

(i) An oil-in temperature indicator for each engine.

(j) A tachometer for each engine.

(k) An independent fuel pressure warning device for each engine or a master warning device for all engines with a means for isolating the individual warning circuits from the master warning device.

(l) A device for each reversible propeller, to indicate to the pilot when the propeller is in reverse pitch, that complies with the following—

§ 121.308 Lavatory fire protection.

[(a) Except as provided in paragraphs (c) and (d) of this section, no person may operate a passenger-carrying airplane unless each lavatory in the airplane is equipped with a smoke detector system or equivalent that provides a warning light in the cockpit or provides a warning light or audio warning in the passenger cabin which would be readily detected by a flight attendant, taking into consideration the positioning of flight attendants throughout the passenger compartment during various phases of flight.

[(b) Except as provided in paragraph (c) of this section, no person may operate a passenger-carrying airplane unless each lavatory in the airplane is equipped with a built-in fire extinguisher for each disposal receptacle for towels, paper, or waste located within the lavatory. The built-in fire extinguisher must be designed to discharge automatically into each disposal receptacle upon occurrence of a fire in the receptacle.

[(c) Until December 20, 1997, a certificate holder described in § 121.2(a)(1) or (2) may operate an airplane with a passenger seat configuration of 30 or fewer seats that does not comply with the smoke detector system requirements described in paragraph (a) of this section and the fire extinguisher requirements described in paragraph (b) of this section.

[(d) After December 20, 1997, no person may operate a nontransport category airplane type certificated after December 31, 1964, with a passenger seat configuration of 10–19 seats unless that airplane complies with the smoke detector system requirements described in paragraph (a) of this section, except that the smoke detector system or equivalent must provide a warning light in the cockpit or an audio warning that would be readily detected by the flightcrew.]

Docket No. 24073 (50 FR 12733) Eff. 3/29/85

(Amdt. 121–185, Eff. 4/29/85); [(Amdt. 121–251, Eff. 1/19/96)]

with inspection periods established in the operations specifications to ensure its condition for continued serviceability and immediate readiness to perform its intended emergency purposes;

(2) Must be readily accessible to the crew and, with regard to equipment located in the passenger compartment, to passengers;

(3) Must be clearly identified and clearly marked to indicate its method of operation; and

(4) When carried in a compartment or container, must be carried in a compartment or container marked as to contents and the compartment or container, or the item itself, must be marked as to date of last inspection.

(c) *Hand fire extinguishers for crew, passenger, cargo, and galley compartments.* Hand fire extinguishers of an approved type must be provided for use in crew, passenger, cargo, and galley compartments in accordance with the following—

(1) The type and quantity of extinguishing agent must be suitable for the kinds of fires likely to occur in the compartment where the extinguisher is intended to be used and, for passenger compartments, must be designed to minimize the hazard of toxic gas concentrations.

(2) *Cargo compartments.* At least one hand fire extinguisher must be conveniently located for use in each class E cargo compartment that is accessible to crewmembers during flight.

(3) *Galley compartments.* At least one hand fire extinguisher must be conveniently located for use in each galley located in a compartment other than a passenger, cargo, or crew compartment.

(4) *Flightcrew compartment.* At least one hand fire extinguisher must be conveniently located on the flight deck for use by the flightcrew.

(5) *Passenger compartments.* Hand fire extinguishers for use in passenger compartments must be conveniently located and, when two or more are required, uniformly distributed throughout each compartment. Hand fire extinguishers shall be provided in passenger compartments as follows—

must be at least the following number of hand fire extinguishers—

Minimum Number of Hand Fire Extinguishers

Passenger seating accommodations:	*No.*
61 through 200	3
201 through 300	4
301 through 400	5
401 through 500	6
501 through 600	7
601 or more	8

(6) Notwithstanding the requirement for uniform distribution of hand fire extinguishers as prescribed in paragraph (c)(5) of this section, for those cases where a galley is located in a passenger compartment, at least one hand fire extinguisher must be conveniently located and easily accessible for use in the galley.

(7) [At least two of the required hand fire extinguisher installed in passenger-carrying airplanes must contain Halon 1211 (bromochlorofluoromethane) or equivalent as the extinguishing agent. At least one hand fire extinguisher in the passenger compartment must contain Halon 1211 or equivalent.]

(d) *First aid and emergency medical equipment and protective gloves.*

(1) [For treatment of injuries or medical emergencies that might occur during flight time or in minor accidents each passenger-carrying airplane must have the following equipment that meets the specifications and requirements of appendix A of this part:

(i) Approved first aid kits; and

(ii) In airplanes for which a flight attendant is required, an emergency medical kit.]

(2) Pairs of protective latex gloves, or equivalent nonpermeable gloves, equal in number to the number of first aid kits on board the aircraft. These gloves must be distributed as evenly as practicable throughout the cabin of the aircraft.

(e) *Crash ax.* [Except for nontransport category airplanes type certificated after December 31, 1964, each airplane must be equipped with a crash ax.]

in the passenger cabin where it would be readily accessible to a normal flight attendant seat. However, the Administrator may grant a deviation from the requirements of this subparagraph if he finds that a different location would be more useful for evacuation of persons during an emergency.

(2) Two megaphones in the passenger cabin on each airplane with a seating capacity of more than 99 passengers, one installed at the forward end and the other at the most rearward location where it would be readily accessible to a normal flight attendant seat.

(Amdt. 121–2, Eff. 6/7/65); (Amdt. 121–20, Eff. 6/30/66); (Amdt. 121–30, Eff. 10/24/67); (Amdt. 121–48, Eff. 7/11/69); (Amdt. 121–106, Eff. 9/19/73); (Amdt. 121–185, Eff. 4/29/85); (Amdt. 121–188, Eff. 8/1/86); (Amdt 121–230, Eff. 10/15/92); (Amdt 121–242, Eff. 12/2/94); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.310 Additional emergency equipment.

(a) *Means for emergency evacuation.* Each passenger-carrying landplane emergency exit (other than over-the-wing) that is more than 6 feet from the ground with the airplane on the ground and the landing gear extended, must have an approved means to assist the occupants in descending to the ground. The assisting means for a floor level emergency exit must meet the requirements of § 25.809(f)(1) of this chapter in effect on April 30, 1972, except that, for any airplane for which the application for the type certificate was filed after that date, it must meet the requirements under which the airplane was type certificated. An assisting means that deploys automatically must be armed during taxiing, takeoffs, and landings. However, if the Administrator finds that the design of the exit makes compliance impractical, he may grant a deviation from the requirement of automatic deployment if the assisting means automatically erects upon deployment and, with respect to required emergency exits, if an emergency evacuation demonstration is conducted in accordance with § 121.291(a). This paragraph does not apply to the rear window emergency exit of DC–3 airplanes operated with less

of each passenger emergency exit must be recognizable from a distance equal to the width of the cabin. The location of each passenger emergency exit must be indicated by a sign visible to occupants approaching along the main passenger aisle. There must be a locating sign—

(i) Above the aisle near each over-the-wing passenger emergency exit, or at another ceiling location if it is more practical because of low headroom;

(ii) Next to each floor level passenger emergency exit, except that one sign may serve two such exits if they both can be seen readily from that sign; and

(iii) On each bulkhead or divider that prevents fore and aft vision along the passenger cabin, to indicate emergency exits beyond and obscured by it, except that if this is not possible the sign may be placed at another appropriate location.

(2) Each passenger emergency exit marking and each locating sign must meet the following—

(i) [Except as provided in paragraph (b)(2)(iii) of this section,] for an airplane for which the application for the type certificate was filed prior to May 1, 1972, each passenger emergency exit marking and each locating sign must be manufactured to meet the requirements of § 25.812(b) of this chapter in effect on April 30, 1972. On these airplanes, no sign may continue to be used if its luminescence (brightness) decreases to below 100 microlamberts. The colors may be reversed if it increases the emergency illumination of the passenger compartment. However, the Administrator may authorize deviation from the two-inch background requirements if he finds that special circumstances exist that make compliance impractical and that the proposed deviation provides an equivalent level of safety.

(ii) [For a transport category airplane] for which the application for the type certificate was filed on or after May 1, 1972, each passenger emergency exit marking and each locating sign must be manufactured to meet the interior emergency exit marking requirements under which the airplane was type certificated.

of § 25.811(b) of this chapter. On these airplanes, no sign may continue to be used if its luminescence (brightness) decreases to below 100 microlamberts.]

(c) *Lighting for interior emergency exit markings.* Except for nontransport category airplanes type certificated after December 31, 1964, each passenger-carrying airplane must have an emergency lighting system, independent of the main lighting system. However, sources of general cabin illumination may be common to both the emergency and the main lighting systems if the power supply to the emergency lighting system is independent of the power supply to the main lighting system. The emergency lighting system must—

(1) Illuminate each passenger exit marking and locating sign;

(2) Provide enough general lighting in the passenger cabin so that the average illumination when measured at 40-inch intervals at seat armrest height, on the centerline of the main passenger aisle, is at least 0.05 footcandles; and

(3) For airplanes type certificated after January 1, 1958, after November 26, 1986, include floor proximity emergency escape path marking which meets the requirements of § 25.812(e) of this chapter in effect on November 26, 1984.

(d) *Emergency light operation.* Except for lights forming part of emergency lighting subsystems provided in compliance with § 25.812(h) of this chapter (as prescribed in paragraph (h) of this section) that serve no more than one assist means, are independent of the airplane's main emergency lighting systems, and are automatically activated when the assist means is deployed, each light required by paragraphs (c) and (h) must comply with the following—

(1) Each light must—

(i) Be operable manually both from the flightcrew station and, for airplanes on which a flight attendant is required, from a point in the passenger compartment that is readily accessible to a normal flight attendant seat;

(ii) Have a means to prevent inadvertent operation of the manual controls; and

(3) Each light must provide the required level of illumination for at least 10 minutes at the critical ambient conditions after emergency landing.

(4) Each light must have a cockpit control device that has an "on," "off," and "armed" position.

(e) *Emergency exit operating handles.*

(1) For a passenger-carrying airplane for which the application for the type certificate was filed prior to May 1, 1972, the location of each passenger emergency exit operating handle, and instructions for opening the exit, must be shown by a marking on or near the exit that is readable from a distance of 30 inches. In addition, for each Type I and Type II emergency exit with a locking mechanism released by rotary motion of the handle, the instructions for opening must be shown by—

(i) A red arrow with a shaft at least ¾ inch wide and a head twice the width of the shaft, extending along at least 70 degrees of arc at a radius approximately equal to ¾ of the handle length; and

(ii) The word "open" in red letters one inch high placed horizontally near the head of the arrow.

(2) For a passenger-carrying airplane for which the application for the type certificate was filed on or after May 1, 1972, the location of each passenger emergency exit operating handle and instructions for opening the exit must be shown in accordance with the requirements under which the airplane was type certificated. On these airplanes, no operating handle or operating handle cover may continue to be used if its luminescence (brightness) decreases to below 100 microlamberts.

(f) *Emergency exit access. Access to emergency exits must be provided as follows for each passenger-carrying transport category airplane:*

(1) Each passageway between individual passenger areas, or leading to a Type I or Type II emergency exit, must be unobstructed and at least 20 inches wide.

in effect before December 20, 1951, if he finds that special circumstances exist that provide an equivalent level of safety.

(3) There must be access from the main aisle to each Type III and Type IV exit. The access from the aisle to these exits must not be obstructed by seats, berths, or other protrusions in a manner that would reduce the effectiveness of the exit. In addition—

(i) For an airplane for which the application for the type certificate was filed prior to May 1, 1972, the access must meet the requirements of § 25.813(c) of this chapter in effect on April 30, 1972; and

(ii) For an airplane for which the application for the type certificate was filed on or after May 1, 1972, the access must meet the emergency exit access requirements under which the airplane was certificated; except that—

(iii) After December 3, 1992, the access for an airplane type certificated after January 1, 1958, must meet the requirements of § 25.813(c) of this chapter, effective June 3, 1992.

(iv) Contrary provisions of this section notwithstanding, the Manager of the Transport Airplane Directorate, Aircraft Certification Service, Federal Aviation Administration, may authorize deviation from the requirements of paragraph (f)(3)(iii) of this section if it is determined that special circumstances make compliance impractical. Such special circumstances include, but are not limited to, the following conditions when they preclude achieving compliance with § 25.813(c)(1)(i) or (ii) without a reduction in the total number of passenger seats: emergency exits located in close proximity to each other; fixed installations such as lavatories, galleys, *etc.*; permanently mounted bulkheads; an insufficient number of seat rows ahead of or behind the exit to enable compliance without a reduction in the seat row pitch of more than one inch; or an insufficient number of such rows to enable compliance without a reduction in the seat row pitch to less than 30 inches. A request for such grant must outline the airplanes for which compliance will be achieved by December 3, 1992, and include a proposed schedule for incremental compliance of the remaining airplanes in the operator's fleet. In addition, the request must include credible reasons why compliance cannot be achieved earlier.

(4) If it is necessary to pass through a passageway between passenger compartments to reach any required emergency exit from any seat in the passenger cabin, the passageway must not be obstructed. However, curtains may be used if they allow free entry through the passageway.

(5) No door may be installed in any partition between passenger compartments.

(6) If it is necessary to pass through a doorway separating the passenger cabin from other areas to reach any required emergency exit from any passenger seat, the door must have a means to latch it in open position, and the door must be latched open during each takeoff and landing. The latching means must be able to withstand the loads imposed upon it when the door is subjected to the ultimate inertia forces, relative to the surrounding structure, listed in § 25.561(b) of this chapter.

(g) *Exterior exit markings.* Each passenger emergency exit and the means of opening that exit from the outside must be marked on the outside of the airplane. There must be a 2-inch colored band outlining each passenger emergency exit on the side of the fuselage. Each outside marking, including the band, must be readily distinguishable from the surrounding fuselage area by contrast in color.

The markings must comply with the following—

(1) If the reflectance of the darker color is 15 percent or less, the reflectance of the lighter color must be at least 45 percent.

(2) If the reflectance of the darker color is greater than 15 percent, at least a 30-percent difference between its reflectance and the reflectance of the lighter color must be provided.

other sizes. Reflectance is the ratio of the luminous flux reflected by a body to the luminous flux it receives.

(h) *Exterior emergency lighting and escape route.*

(1) Except for nontransport category airplanes certificated after December 31, 1964, each passenger-carrying airplane must be equipped with exterior lighting that meets the following requirements:

(i) For an airplane for which the application for the type certificate was filed prior to May 1, 1972, the requirements of § 25.812(f) and (g) of this chapter in effect on April 30, 1972.

(ii) For an airplane for which the application for the type certificate was filed on or after May 1, 1972, the exterior emergency lighting requirements under which the airplane was type certificated.

(2) Each passenger-carrying airplane must be equipped with a slip-resistant escape route that meets the following requirements—

(i) For an airplane for which the application for the type certificate was flied prior to May 1, 1972, the requirements of § 25.803(e) of this chapter in effect on April 30, 1972.

(ii) For an airplane for which the application for the type certificate was filed on or after May 1, 1972, the slip-resistant escape route requirements under which the airplane was type certificated.

(i) *Floor level exits.* Each floor level door or exit in the side of the fuselage (other than those leading into a cargo or baggage compartment that is not accessible from the passenger cabin) that is 44 or more inches high and 20 or more inches wide, but not wider than 46 inches, each passenger ventral exit (except the ventral exits on M–404 and CV–240 airplanes), and each tail cone exit, must meet the requirements of this section for floor level emergency exits. However, the Administrator may grant a deviation from this paragraph if he finds that circumstances make full compliance impractical and that an acceptable level of safety has been achieved.

(j) *Additional emergency exits.* Approved emergency exits in the passenger compartments that are in excess of the minimum number of required emer-

(2) Marked with a placard readable from a distance of 30 inches and installed at a conspicuous location near the means of opening the exit, stating that the exit has been designed and constructed so that it cannot be opened during flight.

(l) *Portable lights. No person may operate a passenger-carrying airplane unless it is equipped with flashlight stowage provisions accessible from each flight attendant seat.*

(m) Except as provided by § 121.627(c) and except for an airplane used in operations under this part on October 16, 1987, and having an emergency exit configuration installed and authorized for operation prior to October 16, 1987, for an airplane that is required to have more than one passenger emergency exit for each side of the fuselage, no passenger emergency exit shall be more than 60 feet from any adjacent passenger emergency exit on the same side of the same deck of the fuselage, as measured parallel to the airplane's longitudinal axis between the nearest exit edges.

(Amdt. 121–2, Eff. 6/7/65); (Amdt. 121–20, Eff. 6/30/66); (Amdt. 121–30, Eff. 10/24/67); (Amdt. 121–35, Eff. 10/24/67); (Amdt. 121–38, Eff. 1/31/68); (Amdt. 121–41, Eff. 6/20/68); (Amdt. 121–45, Eff. 2/15/69); (Amdt. 121–46, Eff. 4/23/69); (Amdt. 121–47, Eff. 7/11/69); (Amdt. 121–77, Eff. 9/25/71); (Amdt. 121–84, Eff. 5/1/72); (Amdt. 121–99, Eff. 12/31/72); (Amdt. 121–149, Eff. 12/1/78); (Amdt. 121–183, Eff. 11/26/84); (Amdt. 121–205, Eff. 7/24/89); (Amdt. 121–228, Eff. 6/3/92); (Amdt. 121–251, Eff. 1/19/96); [(Amdt. 121–262, Eff. 3/12/97)]

§ 121.311 Seats, safety belts, and shoulder harnesses.

(a) No person may operate an airplane unless there are available during the takeoff, en route flight, and landing—

(1) An approved seat or berth for each person on board the airplane who has reached his second birthday; and

(2) An approved safety belt for separate use by each person on board the airplane who has reached his second birthday, except that two per-

and landing. A safety belt provided for the occupant of a seat may not be used by more than one person who has reached his or her second birthday. Notwithstanding the preceding requirements, a child may—

(1) [Be held by an adult who is occupying an approved seat or berth, provided the child has not reached his or her second birthday and the child does not occupy or use any restraining device; or]

(2) Nothwithstanding any other requirement of this chapter, occupy an approved child restraint system furnished by the certificate holder or one of the persons described in paragraph (b)(2)(i) of this section, provided—

(i) The child is accompanied by a parent, guardian, or attendant designated by the child's parent or guardian to attend to the safety of the child during the flight;

(ii) [Except as provided in paragraph (b)(2)(ii)(D) of this section, the approved child restraint system bears one or more labels as follows:]

(A) Seats manufactured to U.S. standards between January 1, 1981, and February 25, 1985, must bear the label: "This child restraint system conforms to all applicable Federal motor vehicle safety standards."

(B) Seats manufactured to U.S. standards on or after February 26, 1985, must bear two labels—

(1) "This child restraint system conforms to all applicable Federal motor vehicle safety standards"; and

(2) "This restraint is certified for use in motor vehicles and aircraft" in red lettering;

(C) Seats that do not qualify under paragraphs (b)(2)(ii)(A) and (b)(2)(ii)(B) of this section must bear either a label showing approval of a foreign government or a label showing that the seat was manufactured under the standards of the United Nations;

[(D) Notwithstanding any other provisions of this section, booster-type child restraint

(A) The restraint system must be properly secured to an approved forward-facing seat or berth;

(B) The child must be properly secured in the restraint system and must not exceed the specified weight limit for the restraint system; and

(C) The restraint system must bear the appropriate label(s).

(c) [Except as provided in paragraph (c)(3), the following prohibitions apply to certificate holders:

[(1) No certificate holder may permit a child, in an aircraft, to occupy a booster-type child restraint system, a vest-type child restraint system, a harness-type child restraint system, or a lap held child restraint system during take off, landing, and movement on the surface.

[(2) Except as required in paragraph (c)(1) of this section, no certificate holder may prohibit a child, if requested by the child's parent, guardian, or designated attendant, from occupying a child restraint system furnished by the child's parent, guardian, or designated attendant provided—

[(i) The child holds a ticket for an approved seat or berth or such seat or berth is otherwise made available by the certificate holder for the child's use;

[(ii) The requirements of paragraph (b)(2)(i) are met;

[(iii) The requirements of (b)(2)(iii) are met; and

[(iv) The child restraint system has one or more of the labels described in paragraph (b)(2)(ii)(A) through paragraph (b)(2)(ii)(C).

[(3) This section does not prohibit the certificate holder from providing child restraint systems authorized by this section or, consistent with safe operating practices, determining the most appropriate passenger seat location for the child restraint system.]

(d) Each sideward facing seat must comply with applicable requirements of § 25.785(c) of this chapter.

(e) Except as provided in paragraphs (e)(1) through (e)(3) of this section, no certificate holder

accordance with procedures in the certificate holder's manual if the seat back does not obstruct any passenger's access to the aisle or to any emergency exit.

(3) On airplanes with no flight attendant, the certificate holder may take off or land as long as the flightcrew instructs each passenger to place his or her seat back in the upright position for takeoff and landing.

(f) No person may operate a transport category airplane that was type certificated after January 1, 1958, or a nontransport category airplane manufactured after March 20, 1997, unless it is equipped at each flight deck station with a combined safety belt and shoulder harness that meets the applicable requirements specified in § 25.785 of this chapter, effective March 6, 1980, except that—

(1) Shoulder harnesses and combined safety belt and shoulder harnesses that were approved and installed before March 6, 1980, may continue to be used; and

(2) Safety belt and shoulder harness restraint systems may be designed to the inertia load factors established under the certification basis of the airplane.

(g) Each flight attendant must have a seat for takeoff and landing in the passenger compartment that meets the requirements of § 25.785 of this chapter, effective March 6, 1980, except that—

(1) Combined safety belt and shoulder harnesses that were approved and installed before March 6, 1980, may continue to be used; and

(2) Safety belt and shoulder harness restraint systems may be designed to the inertia load factors established under the certification basis of the airplane.

(3) The requirements of § 25.785(h) do not apply to passenger seats occupied by flight attendants not required by § 121.391.

(h) Each occupant of a seat equipped with a shoulder harness or with a combined safety belt and shoulder harness must have the shoulder harness or combined safety belt and shoulder harness properly secured about that occupant during takeoff and landing, except that a shoulder harness that is not combined with a safety belt may be unfas-

6/20/68); (Amdt. 121–75, Eff. 8/30/71); (Amdt. 121–84, Eff. 5/1/72); (Amdt. 121–133, Eff. 5/16/77); (Amdt. 121–155, Eff. 3/6/80); (Amdt. 121–157, Eff. 5/6/80); (Amdt. 121–170, Eff. 3/6/81); (Amdt. 121–177, Eff. 3/6/82); (Amdt 121–230, Eff. 10/15/92); (Amdt. 121–251, Eff. 1/19/96); [(Amdt. 121–255, Eff. 9/3/96)]

§ 121.312 Materials for compartment interiors.

[(a) *All interior materials; transport category airplanes and nontransport category airplanes type certificated before January 1, 1965.* Except for the materials covered by paragraph (b) of this section, all materials in each compartment of a transport category airplane, or a nontransport category airplane type certificated before January 1, 1965, used by the crewmembers and passengers, must meet the requirements of § 25.853 of this chapter in effect as follows, or later amendment thereto:

(1) *Airplane with passenger seating capacity of 20 or more.*

(i) *Manufactured after August 19, 1988, but prior to August 20, 1990.* Except as provided in paragraph (a)(3)(ii) of this section, each airplane with a passenger capacity of 20 or more and manufactured after August 19, 1988, but prior to August 20, 1990, must comply with the heat release rate testing provisions of § 25.853(d) in effect March 6, 1995 (formerly § 25.853(a–1) in effect on August 20, 1986) (see app. L of this part), except that the total heat release over the first 2 minutes of sample exposure must not exceed 100 kilowatt minutes per square meter and the peak heat release rate must not exceed 100 kilowatts per square meter.

(ii) *Manufactured after August 19, 1990.* Each airplane with a passenger capacity of 20 or more and manufactured after August 19, 1990, must comply with the heat release rate and smoke testing provisions of § 25.853(d) in effect March 6, 1995 (formerly § 25.853(a–1) (see app. L of this part) in effect on September 26, 1988).

30, 1972, regardless of passenger capacity, if there is a substantially complete replacement of the cabin interior after April 30, 1972.

(ii) *Airplane for which the application for type certificate was filed on or after May 1, 1972.* Except as provided in paragraph (a)(3)(i) or (a)(3)(ii) of this section, each airplane for which the application for type certificate was filed on or after May 1, 1972, must comply with the material requirements under which the airplane was type certificated, regardless of passenger capacity, if there is a substantially complete replacement of the cabin interior on or after that date.

(3) *Airplane type certificated after January 1, 1958, with passenger capacity of 20 or more.*

(i) *Substantially complete replacement of the cabin interior on or after March 6, 1995.* Except as provided in paragraph (a)(3)(ii) of this section, each airplane that was type certificated after January 1, 1958, and has a passenger capacity of 20 or more, must comply with the heat release rate testing provisions of § 25.853(d) in effect March 6, 1995 (formerly § 25.853(a–1) in effect on August 20, 1986) (see app. L of this part), if there is a substantially complete replacement of the cabin interior components identified in § 25.853(d), on or after that date, except that the total heat release over the first 2 minutes of sample exposure shall not exceed 100 kilowatt-minutes per square meter and the peak heat release rate must not exceed 100 kilowatts per square meter.

(ii) *Substantially complete replacement of the cabin interior on or after August 20, 1990.* Each airplane that was type certificated after January 1, 1958, and has a passenger capacity of 20 or more, must comply with the heat release rate and smoke testing provisions of § 25.853(d) in effect March 6, 1995 (formerly § 25.853(a–1) in effect on September 26, 1988) (see app. L of this part), if there is a substantially complete replacement of the cabin interior components identified in § 25.853(d), on or after August 20, 1990.

emission requirements, if the determination is made that special circumstances exist that make compliance impractical. Such grants of deviation will be limited to those airplanes manufactured within 1 year after the applicable date specified in this section and those airplanes in which the interior is replaced within 1 year of that date. A request for such grant of deviation must include a thorough and accurate analysis of each component subject to § 25.853(a–1), the steps being taken to achieve compliance, and, for the few components for which timely compliance will not be achieved, credible reasons for such noncompliance.

(5) Contrary provisions of this section notwithstanding, galley carts and galley standard containers that do not meet the flammability and smoke emission requirements of § 25.853(d) in effect March 6, 1995 (formerly § 25.853(a–1)) (see app. L of this part) may be used in airplanes that must meet the requirements of paragraphs (a)(1)(i), (a)(1)(ii), (a)(3)(i), or (a)(3)(ii) of this section, provided the galley carts or standard containers were manufactured prior to March 6, 1995.

[(b) *Seat cushions.* Seat cushions, except those on flight crewmember seats, in each compartment occupied by crew or passengers, must comply with the requirements pertaining to seat cushions in § 25.853(c) effective on November 26, 1984, on each airplane as follows:

(1) Each transport category airplane type certificated after January 1, 1958; and

(2) On or after December 20, 2010, each nontransport category airplane type certificated after December 31, 1964.

[(c) *All interior materials; airplanes type certificated in accordance with SFAR No. 41 of 14 CFR part 21.* No person may operate an airplane that conforms to an amended or supplemental type certificate issued in accordance with SFAR No. 41 of 14 CFR part 21 for a maximum certificated takeoff weight in excess of 12,500 pounds unless the airplane meets the compartment interior requirements set forth in § 25.853(a) in effect March 6, 1995 (formerly § 25.853(a), (b), (b–1), (b–2), and

under which the airplane was type certificated.]

(Amdt. 121–30, Eff. 10/24/67); (Amdt. 121–84, Eff. 5/1/72); (Amdt. 121–184, Eff. 11/26/84); (Amdt. 121–189, Eff. 8/20/86); (Amdt. 121–198, Eff. 9/26/88); (Amdt. 121–247, Eff. 3/6/95); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.313 Miscellaneous equipment.

No person may conduct operation unless the following equipment is installed in the airplane—

(a) If protective fuses are installed on an airplane, the number of spare fuses approved for that airplane and appropriately described in the certificate holder's manual.

(b) A windshield wiper or equivalent for each pilot station.

(c) A power supply and distribution system that meets the requirements of §§ 25.1309, 25.1331, 25.1351(a) and (b)(1) through (4), 25.1353, 25.1355, and 25.1431(b) or that is able to produce and distribute the load for the required instruments and equipment, with use of an external power supply if any one power source or component of the power distribution system fails. The use of common elements in the system may be approved if the Administrator finds that they are designed to be reasonably protected against malfunctioning. Engine-driven sources of energy, when used, must be on separate engines.

(d) A means for indicating the adequacy of the power being supplied to required flight instruments.

(e) Two independent static pressure systems, vented to the outside atmospheric pressure so that they will be least affected by air flow variation or moisture or other foreign matter, and installed so as to be airtight except for the vent. When a means is provided for transferring an instrument from its primary operating system to an alternate system, the means must include a positive positioning control and must be marked to indicate clearly which system is being used.

(f) [A door between the passenger and pilot compartments, with a locking means to prevent passengers from opening it without the pilot's permission, except that nontransport category airplanes to indicate that it must be open during takeoff and landing.

(i) A means for the crew, in an emergency to unlock each door that leads to a compartment that is normally accessible to passengers and that can be locked by passengers.

(Amdt. 121–5, Eff. 4/30/65); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.314 Cargo and baggage compartments.

(a) [Each] Class C or D compartment, as defined in § 25.857 of part 25 of this chapter, greater than 200 cubic feet in volume in a transport category airplane type certificated after January 1, 1958, must have ceiling and sidewall liner panels which are constructed of—

(1) Glass fiber reinforced resin;

(2) Materials which meet the test requirements of part 25, appendix F, part III of this chapter; or

(3) In the case of liner installations approved prior to March 20, 1989, aluminum.

(b) For compliance with this section, the term ''liner'' includes any design feature, such as a joint or fastener, which would affect the capability of the liner to safely contain a fire.

Docket No. 25430 (54 FR 7389) Eff. 2/17/89

(Amdt. 121–202, Eff. 3/20/89); [(Amdt. 121–253, Eff. 2/26/96)]

§ 121.315 Cockpit check procedure.

(a) Each certificate holder shall provide an approved cockpit check procedure for each type of aircraft.

(b) The approved procedures must include each item necessary for flight crewmembers to check for safety before starting engines, taking off, or landing, and in engine and systems emergencies. The procedures must be designed so that a flight crewmember will not need to rely upon his memory for items to be checked.

on October 30, 1989.

Docket No. 25614 (54 FR 40354) Eff. 9/29/89

(Amdt. 121–208, Eff. 10/30/89)

§ 121.317 Passenger information.

(a) Except as provided in paragraph (l) of this section, no person may operate an airplane unless it is equipped with passenger information signs that meet the requirements of § 25.791 of this chapter. Except as provided in paragraph (l) of this section, the signs must be constructed so that the crewmembers can turn them on and off.

(b) Except as provided in paragraph (l) of this section, the ''Fasten Seat Belt'' sign shall be turned on during any movement on the surface, for each takeoff, for each landing, and at any other time considered necessary by the pilot in command.

(c) No person may operate an aircraft on a flight segment on which smoking is prohibited unless the ''No Smoking'' passenger information signs are lighted during the entire flight segment, or one or more ''No Smoking'' placards meeting the requirements of § 25.1541 are posted during the entire flight segment. If both the lighted signs and the placards are used, the signs must remain lighted during the entire flight segment.

Smoking is prohibited on scheduled flight segments—

(1) Between any two points within Puerto Rico, the United States Virgin Islands, the District of Columbia, or any State of the United States (other than Alaska or Hawaii) or between any two points in any one of the above-mentioned jurisdictions (other than Alaska or Hawaii);

(2) Within the State of Alaska or within the State of Hawaii; or

(3) Scheduled in the current Worldwide or North American Edition of the *Official Airline Guide* for 6 hours or less in duration and between any point listed in paragraph (c)(1) of this section and any point in Alaska or Hawaii, or between any point in Alaska and any point in Hawaii.

(d) No person may operate a passenger-carrying airplane under this part unless at least one legible placards need not meet the requirements of paragraph (a) of this section.

(f) Each passenger required by § 121.311(b) to occupy a seat or berth shall fasten his or her safety belt about him or her and keep it fastened while the ''Fasten Seat Belt'' sign is lighted.

(g) No person may smoke while a ''No Smoking'' sign is lighted or if ''No Smoking'' placards are posted, except that the pilot in command may authorize smoking on the flight deck except during airplane movement on the surface, takeoff, or landing.

(h) No person may smoke in any airplane lavatory.

(i) No person may tamper with, disable, or destroy any smoke detector installed in any airplane lavatory.

(j) On flight segments other than those described in paragraph (c) of this section, the ''No Smoking'' sign must be turned on during any movement on the surface, for each takeoff, for each landing, and at any other time considered necessary by the pilot in command.

(k) Each passenger shall comply with instructions given him or her by a crewmember regarding compliance with paragraphs (f), (g), (h), and (l) of this section.

(l) A certificate holder may operate a nontransport category airplane type certificated after December 31, 1964, that is manufactured before [December 20, 1997], if it is equipped with at least one placard that is legible to each person seated in the cabin that states ''Fasten Seat Belt,'' and if, during any movement on the surface, for each takeoff, for each landing, and at any other time considered necessary by the pilot in command, a crewmember orally instructs the passengers to fasten their seat belts.

Docket No. 25590 (53 FR 12361) Eff. 4/13/88

(Amdt. 121–84, Eff. 5/1/72); (Amdt. 121–143, Eff. 6/26/78); (Amdt. 121–159, Eff. 8/31/80); (Amdt. 121–196, Eff. 4/23/88); (Amdt. 121–213, Eff. 2/25/90); (Amdt. 121–230, Eff. 10/15/92); (Amdt. 121–251, Eff. 1/19/96); [(Amdt. 121–256, Eff. 7/15/96)]

phones, selector switches, and signaling devices;

(b) Is approved in accordance with § 21.305 of this chapter;

(c) Is accessible for immediate use from each of two flight crewmember stations in the pilot compartment;

(d) For each required floor-level passenger emergency exit which has an adjacent flight attendant seat, has a microphone which is readily accessible to the seated flight attendant, except that one microphone may serve more than one exit, provided the proximity of the exits allows unassisted verbal communication between seated flight attendants;

(e) Is capable of operation within 10 seconds by a flight attendant at each of those stations in the passenger compartment from which its use is accessible;

(f) Is audible at all passenger seats, lavatories, and flight attendant seats and work stations; and

(g) For transport category airplanes manufactured on or after November 27, 1990, meets the requirements of § 25.1423 of this chapter.

Docket No. 24995 (54 FR 43926) Eff. 10/27/89

(Amdt. 121–105, Eff. 9/8/73); (Amdt. 121–149, Eff. 12/1/78); (Amdt. 121–159, Eff. 8/31/80); (Amdt. 121–179, Eff. 10/1/82); (Amdt. 121–209, Eff. 11/27/89)

§ 121.319 Crewmember interphone system.

(a) [No] person may operate an airplane with a seating capacity of more than 19 passengers unless the airplane is equipped with a crewmember interphone system that—

(1) Reserved

(2) Is capable of operation independent of the public address system required by § 121.318(a) except for handsets, headsets, microphones, selector switches, and signaling devices; and

(3) Meets the requirements of paragraph (b) of this section.

(b) The crewmember interphone system required by paragraph (a) of this section must be approved in accordance with § 21.305 of this chapter and meet the following requirements:

(1) It must be accessible for use from each of two flight crewmember stations in the pilot compartment;

(2) It must be accessible for use from each required flight attendant station in the passenger compartment;

(3) It must be accessible for use from at least one normal flight attendant station in each passenger compartment;

(4) It must be capable of operation within 10 seconds by a flight attendant at those stations in each passenger compartment from which its use is accessible; and

(5) For large turbojet-powered airplanes—

(i) It must be accessible for use at enough flight attendant stations so that all floor-level emergency exits (or entryways to those exits in the case of exits located within galleys) in each passenger compartment are observable from one or more of those stations so equipped;

(ii) It must have an alerting system incorporating aural or visual signals for use by flight crewmembers to alert flight attendants and for use by flight attendants to alert flight crewmembers;

(iii) The alerting system required by paragraph (b)(5)(ii) of this section must have a means for the recipient of a call to determine whether it is a normal call or an emergency call; and

(iv) When the airplane is on the ground, it must provide a means of two-way communication between ground personnel and either of at least two flight crewmembers in the pilot compartment. The interphone system station for use by ground personnel must be so located that personnel using the system may avoid visible detection from within the airplane.

Docket No. 10865 (38 FR 21494) Eff. 8/9/73

(Amdt. 121–20, Eff. 6/30/66); (Amdt. 121–30, Eff. 10/24/67); (Amdt. 121–105, Eff. 9/8/73); (Amdt. 121–121, Eff. 9/8/75); (Amdt. 121–149, Eff. 12/1/78); (Amdt. 121–178, Eff. 4/28/82); [(Amdt. 121–253, Eff. 2/26/96)]

§ 121.321 [Reserved]

(Amdt. 121–3, Eff. 4/1/65); (Amdt. 121–155, Eff. 3/6/80)

(c) [Two landing lights, except that only one landing light is required for nontransport category airplanes type certificated after December 31, 1964.]

(d) Instrument lights providing enough light to make each required instrument, switch, or similar instrument, easily readable and installed so that the direct rays are shielded from the flight crewmembers' eyes and that no objectionable reflections are visible to them. There must be a means of controlling the intensity of illumination unless it is shown that nondimming instrument lights are satisfactory.

(e) An airspeed-indicating system with heated pitot tube or equivalent means for preventing malfunctioning due to icing.

(f) A sensitive altimeter.

[(Amdt. 121–251, Eff. 1/19/96)]

§ 121.325 Instruments and equipment for operations under IFR or over-the-top.

No person may operate an airplane under IFR or over-the-top conditions unless it is equipped with the following instruments and equipment, in addition to those required by §§ 121.305 through 121.321—

(a) An airspeed indicating system with heated pitot tube or equivalent means for preventing malfunctioning due to icing.

(b) A sensitive altimeter.

(c) Instrument lights providing enough light to make each required instrument, switch, or similar instrument, easily readable and so installed that the direct rays are shielded from the flight crewmembers' eyes and that no objectionable reflections are visible to them, and a means of controlling the intensity of illumination unless it is shown that nondimming instrument lights are satisfactory.

mental oxygen required for a particular operation is determined on the basis of flight altitudes and flight duration, consistent with the operation procedures established for each operation and route.

(b) *Crewmembers.*

(1) At cabin pressure altitudes above 10,000 feet up to and including 12,000 feet, oxygen must be provided for, and used by, each member of the flight crew on flight deck duty, and must be provided for other crewmembers, for that part of the flight at those altitudes that is of more than 30 minutes duration.

(2) At cabin pressure altitudes above 12,000 feet, oxygen must be provided for, and used by, each member of the flight crew on flight deck duty, and must be provided for other crewmembers, during the entire flight time at those altitudes.

(3) When a flight crewmember is required to use oxygen, he must use it continuously, except when necessary to remove the oxygen mask or other dispenser in connection with his regular duties. Standby crewmembers who are on call or are definitely going to have flight deck duty before completing the flight must be provided with an amount of supplemental oxygen equal to that provided for crewmembers on duty other than on flight deck duty. If a standby crewmember is not on call and will not be on flight deck duty during the remainder of the flight, he is considered to be a passenger for the purposes of supplemental oxygen requirements.

(c) *Passengers.* Each certificate holder shall provide a supply of oxygen, approved for passenger safety, in accordance with the following—

(1) For flights of more than 30 minutes duration at cabin pressure altitudes above 8,000 feet up to and including 14,000 feet, enough oxygen for 30 minutes for 10 percent of the passengers.

(2) For flights at cabin pressure altitudes above 14,000 feet up to and including 15,000 feet,

airplane, and "flight altitude" means the altitude above sea level at which the airplane is operated. For airplanes without pressurized cabins, "cabin pressure altitude" and "flight altitude" mean the same thing.

§ 121.329 Supplemental oxygen for sustenance: Turbine-engine-powered airplanes.

(a) *General.* When operating a turbine-engine-powered airplane, each certificate holder shall equip the airplane with sustaining oxygen and dispensing equipment for use as set forth in this section—

(1) The amount of oxygen provided must be at least the quantity necessary to comply with paragraphs (b) and (c) of this section.

(2) The amount of sustaining and first-aid oxygen required for a particular operation to comply with the rules in this part is determined on the basis of cabin pressure altitudes and flight duration, consistent with the operating procedures established for each operation and route.

(3) The requirements for airplanes with pressurized cabins are determined on the basis of cabin pressure altitude and the assumption that a cabin pressurization failure will occur at the altitude or point of flight that is most critical from the standpoint of oxygen need and that after the failure the airplane will descend in accordance with the emergency procedures specified in the Airplane Flight Manual, without exceeding its operating limitations, to a flight altitude that will allow successful termination of the flight.

(4) Following the failure, the cabin pressure altitude is considered to be the same as the flight altitude unless it is shown that no probable failure of the cabin or pressurization equipment will result in a cabin pressure altitude equal to the flight altitude. Under those circumstances, the maximum cabin pressure altitude attained may be used as a basis for certification or determination of oxygen supply, or both.

(b) *Crewmembers.* Each certificate holder shall provide a supply of oxygen for crewmembers in accordance with the following—

feet, oxygen must be provided for, and used by, each member of the flight crew on flight deck duty, and must be provided for other crewmembers during the entire flight at those altitudes.

(3) When a flight crewmember is required to use oxygen, he must use it continuously except when necessary to remove the oxygen mask or other dispenser in connection with his regular duties. Standby crewmembers who are on call or are definitely going to have flight deck duty before completing the flight must be provided with an amount of supplemental oxygen equal to that provided for crewmembers on duty other than on flight duty. If a standby crewmember is not on call and will not be on flight deck duty during the remainder of the flight he is considered to be a passenger for the purposes of supplemental oxygen requirements.

(c) *Passengers.* Each certificate holder shall provide a supply of oxygen for passengers in accordance with the following—

(1) For flights at cabin pressure altitudes above 10,000 feet, up to and including 14,000 feet, enough oxygen for that part of the flight at those altitudes that is of more than 30 minutes duration, for 10 percent of the passengers.

(2) For flights at cabin pressure altitudes above 14,000 feet, up to and including 15,000 feet, enough oxygen for that part of the flight at those altitudes for 30 percent of the passengers.

(3) For flights at cabin pressure altitudes above 15,000 feet, enough oxygen for each passenger carried during the entire flight at those altitudes.

§ 121.331 Supplemental oxygen requirements for pressurized cabin airplanes: Reciprocating-engine-powered airplanes.

(a) When operating a reciprocating-engine-powered airplane with a pressurized cabin, each certificate holder shall equip the airplane to comply with paragraphs (b) through (d) of this section in the event of cabin pressurization failure.

(b) *For crewmembers.* When operating at flight altitudes above 10,000 feet, the certificate holder

The oxygen required by § 121.337 may be considered in determining the supplemental breathing supply required for flight crewmembers on flight deck duty in the event of cabin pressurization failure.

(c) *For passengers.* When operating at flight altitudes above 8,000 feet, the certificate holder shall provide oxygen as follows—

(1) When an airplane is not flown at a flight altitude above flight level 250, enough oxygen for 30 minutes for 10 percent of the passengers, if at any point along the route to be flown the airplane can safely descend to a flight altitude of 14,000 feet or less within four minutes.

(2) If the airplane cannot descend to a flight altitude of 14,000 feet or less within four minutes, the following supply of oxygen must be provided—

(i) For that part of the flight that is more than four minutes duration at flight altitudes above 15,000 feet, the supply required by § 121.327(c)(3).

(ii) For that part of the flight at flight altitudes above 14,000 feet, up to and including 15,000 feet, the supply required by § 121.327(c)(2).

(iii) For flight at flight altitudes above 8,000 feet up to and including 14,000 feet, enough oxygen for 30 minutes for 10 percent of the passengers.

(3) When an airplane is flown at a flight altitude above flight level 250, enough oxygen for 30 minutes for 10 percent of the passengers for the entire flight (including emergency descent) above 8,000 feet, up to and including 14,000 feet, and to comply with § 121.327(c)(2) and (3) for flight above 14,000 feet.

(d) For the purposes of this section it is assumed that the cabin pressurization failure occurs at a time during flight that is critical from the standpoint of oxygen need and that after the failure the airplane will descend, without exceeding its normal operating limitations, to flight altitudes allowing safe flight with respect to terrain clearance.

(Amdt. 121–132, Eff. 2/1/77)

(e) of this section in the event of cabin pressurization failure.

(b) *Crewmembers.* When operating at flight altitudes above 10,000 feet, the certificate holder shall supply enough oxygen to comply with § 121.329, but not less than a two-hour supply for each flight crewmember on flight deck duty. The required two hours supply is that quantity of oxygen necessary for a constant rate of descent from the airplane's maximum certificated operating altitude to 10,000 feet in ten minutes and followed by 110 minutes at 10,000 feet. The oxygen required in the event of cabin pressurization failure by § 121.337 may be included in determining the supply required for flight crewmembers on flight deck.

(c) *Use of oxygen masks by flight crewmembers.*

(1) When operating at flight altitudes above flight level 250, each flight crewmember on flight deck duty must be provided with an oxygen mask so designed that it can be rapidly placed on his face from its ready position, properly secured, sealed, and supplying oxygen upon demand; and so designed that after being placed on the face it does not prevent immediate communication between the flight crewmember and other crewmembers over the airplane intercommunication system. When it is not being used at flight altitudes above flight level 250, the oxygen mask must be kept in condition for ready use and located so as to be within the immediate reach of the flight crewmember while at his duty station.

(2) [When operating at flight altitudes above flight level 250, one pilot at the controls of the airplane shall at all times wear and use an oxygen mask secured, sealed, and supplying oxygen, in accordance with the following:

[(i) The one pilot need not wear and use an oxygen mask at or below the following flight levels if each flight crewmember on flight deck duty has a quick-donning type of oxygen mask that the certificate holder has shown can be placed on the face from its ready position, properly secured, sealed, and supplying oxygen upon demand, with one hand and within five seconds:

load capacity of 7,500 pounds or less, at or below flight level 350.

[(ii) Whenever a quick-donning type of oxygen mask is to be used under this section, the certificate holder shall also show that the mask can be put on without disturbing eye glasses and without delaying the flight crewmember from proceeding with his assigned emergency duties. The oxygen mask after being put on must not prevent immediate communication between the flight crewmember and other crewmembers over the airplane intercommunication system.]

(3) Notwithstanding paragraph (c)(2) of this section, if for any reason at any time it is necessary for one pilot to leave his station at the controls of the airplane when operating at flight altitudes above flight level 250, the remaining pilot at the controls shall put on and use his oxygen mask until the other pilot has returned to his duty station.

(4) Before the takeoff of a flight, each flight crewmember shall personally preflight his oxygen equipment to ensure that the oxygen mask is functioning, fitted properly, and connected to appropriate supply terminals, and that the oxygen supply and pressure are adequate for use.

(d) *Use of portable oxygen equipment by cabin attendants.* Each attendant shall, during flight above flight level 250 flight altitude, carry portable oxygen equipment with at least a 15-minute supply of oxygen unless it is shown that enough portable oxygen units with masks or spare outlets and masks are distributed throughout the cabin to ensure immediate availability of oxygen to each cabin attendant, regardless of his location at the time of cabin depressurization.

(e) *Passenger cabin occupants.* When the airplane is operating at flight altitudes above 10,000 feet, the following supply of oxygen must be provided for the use of passenger cabin occupants—

(1) When an airplane certificated to operate at flight altitudes up to and including flight level 250, can at any point along the route to be flown, descend safely to a flight altitude of 14,000 feet or less within four minutes, oxygen must be available at the rate prescribed by this part for prescribed by this part for not less than 10 percent of the passenger cabin occupants for the entire flight after cabin depressurization, at cabin pressure altitudes above 10,000 feet up to and including 14,000 feet and, as applicable, to allow compliance with § 121.329(c)(2) and (3), except that there must be not less than a 10-minute supply for the passenger cabin occupants.

(3) For first aid treatment of occupants who for physiological reasons might require undiluted oxygen following descent from cabin pressure altitudes above flight level 250, a supply of oxygen in accordance with the requirements of § 25.1443(d) must be provided for two percent of the occupants for the entire flight after cabin depressurization at cabin pressure altitudes above 8,000 feet, but in no case to less than one person. An appropriate number of acceptable dispensing units, but in no case less than two, must be provided, with a means for the cabin attendants to use this supply.

(f) *Passenger briefing.* Before flight is conducted above flight level 250, a crewmember shall instruct the passengers on the necessity of using oxygen in the event of cabin depressurization and shall point out to them the location and demonstrate the use of the oxygen-dispensing equipment.

(Amdt. 121–11, Eff. 9/30/65); (Amdt. 121–132, Eff. 2/1/77); [(Amdt. 121–262, Eff. 3/12/97)]

§ 121.335 Equipment standards.

(a) *Reciprocating-engine-powered airplanes.* The oxygen apparatus, the minimum rates of oxygen flow, and the supply of oxygen necessary to comply with § 121.327 must meet the standards established in § 4b.651 of the Civil Air Regulations as in effect on July 20, 1950, except that if the certificate holder shows full compliance with those standards to be impracticable, the Administrator may authorize any change in those standards that he finds will provide an equivalent level of safety.

(b) *Turbine-engine-powered airplanes.* The oxygen apparatus, the minimum rate of oxygen flow, and the supply of oxygen necessary to comply with §§ 121.329 and 121.333 must meet the standards established in § 4b.651 of the Civil Air Regula-

(a) The certificate holder shall furnish approved protective breathing equipment (PBE) meeting the equipment, breathing gas, and communication requirements contained in paragraph (b) of this section.

(b) *Pressurized and nonpressurized cabin airplanes.* Except as provided in paragraph (f) of this section, no person may operate an airplane unless protective breathing equipment meeting the requirements of this section is provided as follows—

(1) *General.* The equipment must protect the flightcrew from the effects of smoke, carbon dioxide or other harmful gases or an oxygen deficient environment caused by other than an airplane depressurization while on flight deck duty and must protect crewmembers from the above effects while combatting fires on board the airplane.

(2) The equipment must be inspected regularly in accordance with inspection guidelines and the inspection periods established by the equipment manufacturer to ensure its condition for continued serviceability and immediate readiness to perform its intended emergency purposes. The inspection periods may be changed upon a showing by the certificate holder that the changes would provide an equivalent level of safety.

(3) That part of the equipment protecting the eyes must not impair the wearer's vision to the extent that a crewmember's duties cannot be accomplished and must allow corrective glasses to be worn without impairment of vision or loss of the protection required by paragraph (b)(1) of this section.

(4) The equipment, while in use, must allow the flightcrew to communicate using the airplane radio equipment and to communicate by interphone with each other while at their assigned duty stations. The equipment, while in use, must also allow crewmember interphone communications between each of two flight crewmember stations in the pilot compartment and at least one normal flight attendant station in each passenger compartment.

(5) The equipment, while in use, must allow any crewmember to use the airplane interphone lows—

(i) The equipment must supply breathing gas for 15 minutes at a pressure altitude of 8,000 feet for the following:

(A) Flight crewmembers while performing flight deck duties;

(B) Crewmembers while combatting an in-flight fire.

(ii) The breathing gas system must be free from hazards in itself, in its method of operation, and in its effect upon other components.

(iii) [For breathing gas systems other than chemical oxygen generators, there must be a means to allow the crew to readily determine, during the equipment preflight described in paragraph (c) of this section, that the gas supply is fully charged.]

(iv) For each chemical oxygen generator, the supply system equipment must meet the requirements of § 25.1450(b) and (c) of this chapter.

(8) Smoke and fume protection. Protective breathing equipment with a fixed or portable breathing gas supply meeting the requirements of this section must be conveniently located on the flight deck and be easily accessible for immediate use by each required flight crewmember at his or her assigned duty station.

(9) Fire combatting. Except for nontransport category airplanes type certificated after December 31, 1964, protective breathing equipment with a portable breathing gas supply meeting the requirements of this section must be easily accessible and conveniently located for immediate use by crewmembers in combatting fires as follows:

([i]) One PBE is required for each hand fire extinguisher located for use in a galley other than a galley located in a passenger, cargo, or crew compartment.

([ii]) One on the flight deck, except that the Administrator may authorize another location for this PBE if special circumstances exist that make compliance impractical and the proposed deviation would provide an equivalent level of safety.

make compliance impractical and if the proposed deviation provides an equivalent level of safety.]

(c) *Equipment preflight.*

(1) Before each flight, each item of PBE at flight crewmember duty stations must be checked by the flight crewmember who will use the equipment to ensure that the equipment—

(i) For other than chemical oxygen generator systems, is functioning, is serviceable, fits properly (unless a universal-fit type), and is connected to supply terminals and that the breathing gas supply and pressure are adequate for use; and

(ii) For chemical oxygen generator systems, is serviceable and fits properly (unless a universal-fit type).

(2) Each item of PBE located at other than a flight crewmember duty station must be checked by a designated crewmember to ensure that each is properly stowed and serviceable, and, for other than chemical oxygen generator systems, the breathing gas supply is fully charged. Each certificate holder, in its operations manual, must designate at least one crewmember to perform those checks before he or she takes off in that airplane for his or her first flight of the day.

Docket No. 24792 (52 FR 20957) Eff. 6/3/87;

(Amdt. 121–193, Eff. 7/6/87); (Amdt. 121–204, Eff. 5/22/89); (Amdt. 121–212, Eff. 2/15/90); (Amdt. 121–218, Eff. 7/30/90); (Amdt. 121–230, Eff. 10/15/92); (Amdt. 121–251, Eff. 1/19/96); [(Amdt. 121–261, Eff. 9/25/96)]

§ 121.339 Emergency equipment for extended over-water operations.

(a) Except where the Administrator, by amending the operations specifications of the certificate holder, requires the carriage of all or any specific items of the equipment listed below for any over-water operation, or upon application of the certificate holder, the Administrator allows deviation for a particular extended over-water operation, no person may operate an airplane in extended over-water of the airplane. Unless excess rafts of enough capacity are provided, the buoyancy and seating capacity of the rafts must accommodate all occupants of the airplane in the event of a loss of one raft of the largest rated capacity.

(3) At least one pyrotechnic signaling device for each life raft.

(4) [An approved survival type emergency locator transmitter. Batteries used in this transmitter must be replaced (or recharged, if the battery is rechargeable) when the transmitter has been in use for more than 1 cumulative hour, or, when 50 percent of their useful life (or for rechargeable batteries, 50 percent of their useful life of charge) has expired, as established by the transmitter manufacturer under its approval. The new expiration date for replacing (or recharging) the battery must be legibly marked on the outside of the transmitter. The battery useful life (or useful life of charge)(requirements of this paragraph do not apply to batteries (such as water-activated batteries) that are essentially unaffected during probable storage intervals.]

(b) The required life rafts, life preservers, and survival type emergency locator transmitter must be easily accessible in the event of a ditching without appreciable time for preparatory procedures. This equipment must be installed in conspicuously marked, approved locations.

(c) A survival kit, appropriately equipped for the route to be flown, must be attached to each required liferaft.

(Amdt. 121–25, Eff. 2/28/67); (Amdt. 121–53, Eff. 10/30/69); (Amdt. 121–79, Eff. 10/21/71); (Amdt. 121–93, Eff. 7/19/72); (Amdt. 121–106, Eff. 9/19/73); (Amdt. 121–149, Eff. 12/1/78); (Amdt. 121–158, Eff. 9/9/80); [(Amdt. 121–239, Eff. 6/21/94)]

§ 121.340 Emergency flotation means.

(a) [Except as provided in paragraph (b) of this section, no person may operate an airplane in any overwater operation unless it is equipped with life preservers in accordance with § 121.339(a)(1) or with an approved flotation means for each occupant. This means must be within easy reach of each

water over which the airplane is to be operated is not such size and depth that life preservers or flotation means would be required for the survival of its occupants in the event the flight terminates in that water.

Docket No. 6713 (31 FR 1147) Eff. 1/28/66

(Amdt. 121–17, Eff. 2/27/66); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.341 Equipment for operations in icing conditions.

(a) [Except as permitted in paragraph (c)(2) of this section, unless an airplane is type certificated under the transport category airworthiness requirements relating to ice protection, or unless an airplane is a nontransport category airplane type certificated after December 31, 1964, that has the ice protection provisions that meet section 34 of appendix A of part 135 of this chapter, no person may operate an airplane in icing conditions unless it is equipped with means for the prevention or removal of ice on windshields, wings, empennage, propellers, and other parts of the airplane where ice formation will adversely affect the safety of the airplane.]

(b) No person may operate an airplane in icing conditions at night unless means are provided for illuminating or otherwise determining the formation of ice on the parts of the wings that are critical from the standpoint of ice accumulation. Any illuminating that is used must be of a type that will not cause glare or reflection that would handicap crewmembers in the performance of their duties.

[(c) *Nontransport category airplanes type certificated after December 31, 1964.* Except for an airplane that has ice protection provisions that meet section 34 of appendix A of part 135 of this chapter, or those for transport category airplane type certification, no person may operate—

(1) Under IFR into known or forecast light or moderate icing conditions;

(2) Under VFR into known light or moderate icing conditions; unless the airplane has functioning deicing anti-icing equipment protecting each propeller, windshield, wing, stabilizing or control during the flight because of changed weather conditions since the forecast, the restrictions in paragraph (c) of this section based on forecast conditions do not apply.]

[(Amdt. 121–251, Eff. 1/19/96)]

§ 121.342 Pitot heat indication systems.

[No person may operate a transport category airplane or, after December 20, 1999, a nontransport category airplane type certificated after December 31, 1964, that is equipped with a flight instrument pitot heating system unless the airplane is also equipped with an operable pitot heat indication system that complies with § 25.1326 of this chapter in effect on April 12, 1978.]

(Amdt. 121–175, Eff. 9/30/81); (Amdt. 121–207, Eff. 10/25/89); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.343 Flight recorders.

(a) Except as provided in paragraphs (b), (c), (d), (e) and (f) of this section, no person may operate a large airplane that is certificated for operations above 25,000 feet altitude or is turbine-engine-powered unless it is equipped with one or more approved flight recorders that record data from which the following may be determined within the ranges, accuracies, and recording intervals specified in appendix B of this part—

(1) Time;

(2) Altitude;

(3) Airspeed;

(4) Vertical acceleration;

(5) Heading; and

(6) Time of each radio transmission either to or from air traffic control.

(b) No person may operate a large airplane type certificated up to and including September 30, 1969, for operations above 25,000 feet altitude, or a turbine-engine-powered airplane certificated before the same date, unless it is equipped before May 26, 1989, with one or more approved flight recorders that utilize a digital method of recording and storing data and a method of readily retrieving that data from the storage medium. The following information must be able to be determined within the

or from air traffic control.

(c) [Except as provided in paragraph (l) of this section, no person may operate an airplane specified in paragraph (b) of this section unless it is equipped, before May 26, 1994, with one or more approved flight recorders that utilize a digital method of recording and storing data and a method of readily retrieving that data from the storage medium.] The following information must be able to be determined within the ranges, accuracies and recording intervals specified in appendix B of this part—

(1) Time;

(2) Altitude;

(3) Airspeed;

(4) Vertical acceleration;

(5) Heading;

(6) Time of each radio transmission either to or from air traffic control;

(7) Pitch attitude;

(8) Roll attitude;

(9) Longitudinal acceleration;

(10) Control column or pitch control surface position; and

(11) Thrust of each engine.

(d) No person may operate an airplane specified in paragraph (b) of this section that is manufactured after May 26, 1989, as well as airplanes specified in paragraph (a) of this section that have been type certificated after September 30, 1969, unless it is equipped with one or more approved flight recorders that utilize a digital method of recording and storing data and a method of readily retrieving that data from the storage medium. The following information must be able to be determined within the ranges, accuracies, and recording intervals specified in appendix B of this part—

(1) Time;

(2) Altitude;

(3) Airspeed;

(4) Vertical acceleration;

(5) Heading;

(6) Time of each radio transmission either to or from air traffic control;

(7) Pitch attitude;

(8) Roll attitude;

(9) Longitudinal acceleration;

(10) Control column or pitch control surface position;

(11) Thrust of each engine;

(12) Trailing edge flap or cockpit flap control position;

(13) Leading edge flap or cockpit flap control position.

(e) After October 11, 1991, no person may operate a large airplane equipped with a digital data bus and ARINC 717 digital flight data acquisition unit (DFDAU) or equivalent unless it is equipped with one or more approved flight recorders that utilize a digital method of recording and storing data and a method of readily retrieving that data from the storage medium. Any parameters specified in appendix B of this part that are available on the digital data bus must be recorded within the ranges, accuracies, resolutions, and sampling intervals specified.

(f) After October 11, 1991, no person may operate an airplane specified in paragraph (b) of this section that is manufactured after October 11, 1991, nor an airplane specified in paragraph (a) of this section that has been type certificated after September 30, 1969, and manufactured after October 11, 1991, unless it is equipped with one or more flight recorders that utilize a digital method of recording and storing data and a method of readily retrieving that data from the storage medium. The parameters specified in appendix B of the part must be recorded within the ranges, accuracies, resolutions, and sampling intervals specified.

(g) Whenever a flight recorder required by this section is installed, it must be operated continuously from the instant the airplane begins the takeoff roll until it has completed the landing roll at an airport.

(h) Except as provided in paragraph (g) of this section, and except for recorded data erased as authorized in this paragraph, each certificate holder shall keep the recorded data prescribed in paragraph (a), (b), (c), or (d) of this section, as appropriate,

this section, no record need be kept more than 60 days.

(i) In the event of an accident or occurrence that requires immediate notification of the National Transportation Safety Board under part 830 of its regulations and that results in termination of the flight, the certificate holder shall remove the recording media from the airplane and keep the recorded data required by paragraph (a), (b), (c), or (d) of this section, as appropriate, for at least 60 days or for a longer period upon the request of the Board or the Administrator.

(j) Each flight recorder required by this section must be installed in accordance with the requirements of § 25.1459 of this chapter in effect on August 31, 1977. The correlation required by § 25.1459(c) of this chapter need be established only on one airplane of any group of airplanes—

(1) That are of the same type;

(2) On which the model flight recorder and its installation are the same; and

(3) On which there is no difference in the type design with respect to the installation of those first pilot's instruments associated with the flight recorder. The most recent instrument calibration, including the recording medium from which this calibration is derived, and the recorder correlation must be retained by the certificate holder.

(k) Each flight recorder required by this section that records the data specified in paragraph (a), (b), (c), or (d) of this section, as appropriate, must have an approved device to assist in locating that recorder under water.

[(l) No person may operate an airplane specified in paragraph (b) of this section that meets the Stage 2 noise levels of part 36 of this chapter and is subject to § 91.801(c) of this chapter unless it is equipped with one or more approved flight data recorders that utilize a digital method of recording and storing data and a method of readily retrieving that data from the storage medium. The information specified in paragraphs (c)(1) through (c)(11) of this section must be able to be determined within the ranges, accuracies and recording intervals specified in appendix B of this part. In addition—

Transportation Division (AFS–200), documentation listing those airplanes covered under this paragraph and evidence that it has ordered a sufficient number of flight data recorders to meet the May 26, 1995, compliance date for all aircraft on that list.

[(3) After May 26, 1994, any aircraft that is modified to meet Stage 3 noise levels must have the flight data recorder described in paragraph (c) of this section installed before operating under this part.]

Docket No. 24418 (52 FR 9636) Eff. 3/25/87

(Amdt. 121–15, Eff. 2/5/66); (Amdt. 121–29, Eff. 6/22/67); (Amdt. 121–37, Eff. 12/14/67); (Amdt. 121–66, Eff. 9/18/70); (Amdt. 121–82, Eff. 1/10/72); (Amdt. 121–130, Eff. 11/26/76); (Amdt. 121–135, Eff. 9/1/77); (Amdt. 121–143, Eff. 6/26/78); (Amdt. 121–191, Eff. 5/26/87); (Amdt. 121–197, Eff. 10/11/88); [(Amdt. 121–238, Eff. 5/24/94)]

[§ 121.344 Flight recorders: Airplanes with a passenger seat configuration of 10–30 passenger seats and a payload capacity of 7,500 pounds or less.

[No person may operate an airplane with a passenger seat configuration of 10–30 passenger seats, excluding each crewmember seat, and a payload capacity of 7,500 pounds or less unless it meets the requirements for flight recorders in § 135.152 of this chapter. A person operating an airplane with a passenger seat configuration of more than 30 passenger seats, or a payload capacity of more than 7,500 pounds shall comply with § 121.343.]

[(Amdt. 121–251, Eff. 1/19/96)]

§ 121.345 Radio equipment.

(a) No person may operate an airplane unless it is equipped with radio equipment required for the kind of operation being conducted.

(b) Where two independent (separate and complete) radio systems are required by §§ 121.347 and 121.349, each system must have an independent antenna installation except that, where rigidly supported nonwire antennas or other antenna installa-

of TSO–C74c as appropriate, provided that the equipment was manufactured before January 1, 1990; or

(ii) The appropriate class of TSO–C112 (Mode S).

(2) *After January 1, 1992.* The appropriate class of TSO–C112 (Mode S). For purposes of paragraph (b)(2) of this section, "installation" does not include—

(i) Temporary installation of TSO–C74b or TSO–C74c substitute equipment, as appropriate, during maintenance of the permanent equipment;

(ii) Reinstallation of equipment after temporary removal for maintenance; or

(iii) For fleet operations, installation of equipment in a fleet aircraft after removal of the equipment for maintenance from another aircraft in the same operator's fleet.

(Amdt. 121–101, Eff. 1/26/73); (Amdt. 121–190, Eff. 4/6/87)

§ 121.347 Radio equipment for operations under VFR over routes navigated by pilotage.

(a) No person may operate an airplane under VFR over routes that can be navigated by pilotage, unless it is equipped with the radio equipment necessary under normal operating conditions to fulfill the following—

(1) Communicate with at least one appropriate ground station from any point on the route.

(2) [Communicate with appropriate traffic control facilities from any point within the lateral boundaries of the surface areas of Class B, Class C, Class D, or Class E airspace designated for an airport in which flights are intended.]

(3) Receive meteorological information from any point en route by either of two independent systems. One of the means provided to comply with this subparagraph may be used to comply with paragraphs (a)(1) and (2) of this section.

(b) No person may operate an airplane at night under VFR over routes that can be navigated by pilotage unless that airplane is equipped with the

§ 121.349 Radio equipment for operations under VFR over routes not navigated by pilotage or for operations under IFR or over-the-top.

(a) No person may operate an airplane under VFR over routes that cannot be navigated by pilotage or for operations conducted under IFR or over-the-top, unless the airplane is equipped with that radio equipment necessary under normal operating conditions to fulfill the functions specified in § 121.347(a) and to receive satisfactorily by either of two independent systems, radio navigational signals from all primary en route and approach navigational facilities intended to be used. However, only one marker beacon receiver providing visual and aural signals and one ILS receiver need be provided. Equipment provided to receive signals en route may be used to receive signals on approach, if it is capable of receiving both signals.

(b) In the case of operation over routes on which navigation is based on low frequency radio range or automatic direction finding, only one low frequency radio range or ADF receiver need be installed if the airplane is equipped with two VOR receivers, and VOR navigational aids are so located and the airplane is so fueled that, in the case of failure of the low frequency radio range receiver or ADF receiver, the flight may proceed safely to a suitable airport, by means of VOR aids, and complete an instrument approach by use of the remaining airplane radio system.

(c) Whenever VOR navigational receivers are required by paragraph (a) or (b) of this section, at least one approved distance measuring equipment unit (DME) capable of receiving and indicating distance information from VORTAC facilities must be installed on each airplane when operated in the 50 states and the District of Columbia.

(d) If the distance measuring equipment (DME) becomes inoperative en route, the pilot shall notify ATC of that failure as soon as it occurs.

[(e) No person may operate an airplane having a passenger seat configuration of 10 to 30 seats, excluding each crewmember seat, and a payload of 7,500 pounds or less under IFR or in extended overwater operations unless it has, in addition to

7/1/66); (Amdt. 121–130, Eff. 11/26/76); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.351 Radio equipment for extended over-water operations and for certain other operations.

(a) [Except as provided in paragraph (c) of this section, no person may conduct an extended overwater operation unless the airplane is equipped with the radio communication equipment necessary to comply with § 121.349, an independent system that complies with § 121.347(a)(1), and two long-range navigation systems when VOR or ADF radio navigation equipment is unusable along a portion of the route.]

(b) No certificate holder conducting a flag or supplemental operation or a domestic operation within the State of Alaska may conduct an operation without the equipment specified in paragraph (a) of this section, if the Administrator finds that equipment to be necessary for search and rescue operations because of the nature of the terrain to be flown over.

[(c) Nothwithstanding the requirements of paragraph (a) of this section, installation and use of a single LRNS and a single LRCS may be authorized by the Administrator and approved in the certificate holder's operations specifications for operations and routes in certain geographic areas. The following are among the operational factors the Administrator may consider in granting an authorization: (1) the ability of the flightcrew to reliably fix the position of the airplane within the degree of accuracy required by ATC, (2) the length of the route being flown, and (3) the duration of the very high frequency communications gap.]

(Amdt. 121–253, Eff. 2/26/96); [(Amdt. 121–254, Eff. 2/26/96)]

§ 121.353 [Emergency equipment for operations over uninhabited terrain areas: Flag, supplemental, and certain domestic operations.

[Unless the airplane has the following equipment, no person may conduct a flag or supplemental operation or a domestic operation over uninhabited terrain areas:

(a) A radio communication system and navigation equipment appropriate to the ground facilities to be used, capable of transmitting to, and receiving from, at any point along the route, at least one ground facility adequate for communication purposes.

(b) Signaling devices.

(c) Enough survival kits, appropriately equipped for the route to be flown, for the number of occupants of the airplane.

(Amdt. 121–79, Eff. 10/21/71); (Amdt. 121–106, Eff. 9/19/73); (Amdt. 121–158, Eff. 9/9/80); (Amdt. 121–239, Eff. 6/21/94); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.355 Equipment for operations on which specialized means of navigation are used.

(a) No certificate holder may conduct an operation—

(1) Using Doppler Radar or an Inertial Navigation System outside the 48 contiguous States and the District of Columbia, unless such systems have been approved in accordance with appendix G to this part; or

(2) Using Doppler Radar or an Inertial Navigation System within the 48 contiguous States and the District of Columbia, or any other specialized means of navigation, unless it shows that an adequate airborne system is provided for the specialized navigation authorized for the particular operation.

(b) Notwithstanding paragraph (a) of this section, Doppler Radar and Inertial Navigation Systems, and the training programs, maintenance programs, relevant operations manual material, and minimum equipment lists prepared in accordance therewith,

trator, each certificate holder operating a large airplane that has a passenger seating configuration, excluding any pilot seat, of more than 30 seats, shall equip its airplanes with an approved TCAS II traffic alert and collision avoidance system and the appropriate class of Mode S transponder according to the following schedule—

Date	*Required Equipage*
December 30, 1990	At least 20% of all covered airplanes, if the certificate holder operates more than 30 such airplanes.
December 30, 1991	50% of all covered airplane.
December 30, 1993	100% of all covered airplanes.

(b) Unless otherwise authorized by the Administrator, after December 31, 1995, no person may operate a passenger or combination cargo/passenger (combi) airplane that has a passenger seat configuration, excluding any pilot seat, of 10 to 30 seats unless it is equipped with an approved traffic alert and collision avoidance system. If a TCAS II system is installed, it must be capable of coordinating with TCAS units that meet TSO C–119.

(c) [The appropriate manuals required by § 121.131 shall contain the following information on the TCAS II System or TCAS I System, as appropriate, as required by this section:]

(1) Appropriate procedures for—

(i) The operation of the equipment; and

(ii) Proper flightcrew action with respect to the equipment.

(2) An outline of all input sources that must be operative for the TCAS to function properly.

Docket No. 25355 (54 FR 951) Eff. 1/10/89

(Amdt. 121–201, Eff. 2/9/89); (Amdt. 121–217, Eff. 5/9/90); (Amdt. 121–246, Eff. 12/29/94); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.357 Airborne weather radar equipment requirements.

(a) [No person may operate any transport category airplane (except C–46 type airplanes) or a nontransport category airplane certificated after December 31, 1964, unless approved airborne

plane (or begin the flight of an airplane in the case of [a certificate holder] that does not use a dispatch system) under IFR or night VFR conditions when current weather reports indicate that thunderstorms, or other potentially hazardous weather conditions that can be detected with airborne weather radar, may reasonably be expected along the route to be flown, unless the airborne weather radar equipment is in satisfactory operating condition.

(2) If the airborne weather radar becomes inoperative en route, the airplane must be operated in accordance with the approved instructions and procedures specified in the operations manual for such an event.

(d) This section does not apply to airplanes used solely within the State of Hawaii or within the State of Alaska and that part of Canada west of longitude 130 degrees W, between latitude 70 degrees N, and latitude 53 degrees N, or during any training, test, or ferry flight.

(e) Notwithstanding any other provision To obtain approval of a retrofit schedule and of this chapter, an alternate electrical power supply is not required for airborne weather radar equipment.

(Amdt. 121–18, Eff. 4/15/66); (Amdt. 121–130, Eff. 11/26/76); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.358 Low-altitude windshear system equipment requirements.

(a) *Airplanes manufactured after January 2, 1991.* No person may operate a turbine-powered airplane manufactured after January 2, 1991, unless it is equipped with either an approved airborne windshear warning and flight guidance system, an approved airborne detection and avoidance system, or an approved combination of these systems.

(b) *Airplanes manufactured before January 3, 1991.* Except as provided in paragraph (c) of this section, after January 2, 1991, no person may operate a turbine-powered airplane manufactured before January 3, 1991 unless it meets one of the following requirements as applicable.

(1) The makes/models/ series listed below must be equipped with either an approved airborne windshear warning and flight guidance system,

(vi) 13–757–all series;

(vii) 13–767–all series;

(viii) F–100–all series;

(ix) MD–11–all series; and

(x) MD–80 series equipped with an EFIS and Honeywell–970 digital flight guidance computer.

(2) All other turbine-powered airplanes not listed above must be equipped with as a minimum requirement, an approved airborne windshear warning system. These airplanes may be equipped with an approved airborne windshear detection and avoidance system, or an approved combination of these systems.

(c) *Extension of the compliance date.* A certificate holder may obtain an extension of the compliance date in paragraph (b) of this section if it obtains FAA approval of a retrofit schedule. To obtain approval of a retrofit schedule and show continued compliance with that schedule, a certificate holder must do the following—

(1) Submit a request for approval of a retrofit schedule by June 1, 1990, to the Flight Standards Division Manager in the region of the certificate holding district office.

(2) Show that all of the certificate holder's airplanes required to be equipped in accordance with this section will be equipped by the final compliance date established for TCAS II retrofit.

(3) Comply with its retrofit schedule and submit status reports containing information acceptable to the Administrator. The initial report must be submitted by January 2, 1991, and subsequent reports must be submitted every six months thereafter until completion of the schedule. The reports must be submitted to the certificate holder's assigned Principal Avionics Inspector.

(d) *Definitions.* For the purposes of this section the following definitions apply—

(1) "Turbine-powered airplane" includes, e.g., turbofan-, turbojet-, propfan-, and ultrahigh bypass fan-powered airplanes. The definition specifically excludes turbopropeller-power airplanes.

(2) An airplane is considered manufactured on the date the inspection acceptance records reflect

turbine-engine-powered airplane or a large pressurized airplane with four reciprocating engines unless an approved cockpit voice recorder is installed in that airplane and is operated continuously from the start of the use of the checklist (before starting engines for the purpose of flight), to completion of the final checklist at the termination of the flight.

(b) [Reserved]

(c) [The cockpit voice recorder required by paragraph (a) of this section must meet the following application standards:]

(1) The requirements of part 25 of this chapter in effect on August 31, 1977.

(2) After September 1, 1980, each recorder container must—

(i) Be either bright orange or bright yellow;

(ii) Have reflective tape affixed to the external surface to facilitate its location under water; and

(iii) Have an approved underwater locating device on or adjacent to the container which is secured in such a manner that they are not likely to be separated during crash impact, unless the cockpit voice recorder, and the flight recorder required by § 121.343, are installed adjacent to each other in such a manner that they are not likely to be separated during crash impact.

[(d) No person may operate a multiengine, turbine-powered airplane having a passenger seat configuration of 10–19 seats unless it is equipped with an approved cockpit voice recorder that:

(1) Is installed in compliance with § 23.1457(a)(1) and (2), (b), (c), (d), (e), (f), and (g); § 25.1457(a)(1) and (2), (b), (c), (d), (e), (f), and (g) of this chapter, as applicable; and

(2) Is operated continuously from the use of the checklist before the flight to completion of the final checklist at the end of the flight.

[(e) No person may operate a multiengine, turbine-powered airplane having a passenger seat configuration of 20 to 30 seats unless it is equipped with an approved cockpit voice recorder that—

(1) Is installed in compliance with § 23.1457 or § 25.1457 of this chapter, as applicable; and

([g]) For those aircraft equipped to record the uninterrupted audio signals received by a boom or a mask microphone, the flight crewmembers are required to use the boom microphone below 18,000 feet mean sea level. No person may operate a large turbine-engine-powered airplane or a large pressurized airplane with four reciprocating engines manufactured after October 11, 1991, or on which a cockpit voice recorder has been installed after October 11, 1991, unless it is equipped to record the uninterrupted audio signal received by a boom or mask microphone in accordance with § 25.1457(c)(5) of this chapter.

([h]) In the event of an accident or occurrence requiring immediate notification of the National Transportation Safety Board under part 830 of its regulations, which results in the termination of the flight, the certificate holder shall keep the recorded information for at least 60 days or, if requested by the Administrator or the Board, for a longer period. Information obtained from the record is used to assist in determining the cause of accidents or occurrences in connection with investigations under part 830. The Administrator does not use the record in any civil penalty or certificate action.

(Amdt. 121–20, Eff. 6/30/66); (Amdt. 121–23, Eff. 12/1/66); (Amdt. 121–32, Eff. 10/6/67); (Amdt. 121–130, Eff. 11/26/76); (Amdt. 121–135, Eff. 9/1/77); (Amdt. 121–143, Eff. 6/26/78); (Amdt. 121–197, Eff. 10/11/88); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.360 Ground proximity warning-glide slope deviation alerting system.

[(a) No person may operate a turbine-powered airplane unless it is equipped with a ground proximity warning system that meets the performance and

(ii) Proper flightcrew action with respect to the equipment;

(iii) Deactivation for planned abnormal and emergency conditions;

(iv) Inhibition of Mode 4 warnings based on flaps being in other than the landing configuration if the system incorporates a Mode 4 flap warning inhibition control; and

(2) An outline of all input sources that must be operating.

[(c) No person may deactivate a ground proximity warning system required by this section except in accordance with the procedures contained in the Airplane Flight Manual.

[(d) Whenever a ground proximity warning system required by this section is deactivated, an entry shall be made in the airplane maintenance record that includes the date and time of deactivation.

[(e) No person may operate a turbine-powered airplane unless it is equipped with a ground proximity warning/glide slope deviation alerting system that meets the performance and environmental standards contained in TSO–C92a or TSO–C92b or incorporates TSO-approved ground proximity warning-glide slope deviation alerting equipment.

[(f) No person may operate a turbojet-powered airplane equipped with a system required by paragraph (e) of this section, that incorporates equipment that meets the performance and environmental standards of TSO–C92b or is approved under that TSO, using other than Warning Envelopes 1 or 3 for Warning Modes 1 and 4.]

(Amdt. 121–114, Eff. 1/23/75); (Amdt. 121–119, Eff. 6/5/75); (Amdt. 121–122, Eff. 10/13/75); (Amdt. 121–125, Eff. 11/1/75); (Amdt. 121–126, Eff. 11/24/75); (Amdt. 121–129, Eff. 8/19/76); [(Amdt. 121–251, Eff. 1/19/96)]

Subpart N—Training Program

Source: Amdt. 121–55 (35 FR 90) Eff. 2/2/70

§ 121.400 Applicability and terms used.

(a) This subpart prescribes the requirements applicable to each certificate holder for establishing and maintaining a training program for crewmembers, aircraft dispatchers, and other operations personnel, and for the approval and use of training devices in the conduct of the program.

(b) For the purpose of this subpart, airplane groups are as follows—

(1) Group I. Propeller driven, including—

(i) Reciprocating powered; and

(ii) Turbopropeller powered.

(2) Group II. Turbojet powered.

(c) For the purpose of this subpart, the following terms and definitions apply—

(1) *Initial training.* The training required for crewmembers and dispatchers who have not qualified and served in the same capacity on another airplane of the same group.

(2) *Transition training.* The training required for crewmembers and dispatchers who have qualified and served in the same capacity on another airplane of the same group.

(3) *Upgrade training.* The training required for crewmembers who have qualified and served as second in command or flight engineer on a particular airplane type, before they serve as pilot in command or second in command, respectively, on that airplane.

(4) *Differences training.* The training required for crewmembers and dispatchers who have qualified and served on a particular type airplane, when the Administrator finds differences training is necessary before a crewmember serves in the same capacity on a particular variation of that airplane.

(5) *Programmed hours.* The hours of training prescribed in this subpart which may be reduced by the Administrator upon a showing by the certificate holder that circumstances justify a lesser amount.

(6) *Inflight.* Refers to maneuvers, procedures, or functions that must be conducted in the airplane.

[(7) *Training center.* An organization governed by the applicable requirements of part 142 of this chapter that provides training, testing, and checking under contract or other arrangement to certificate holders subject to the requirements of this part.

[(8) *Requalification training.* The training required for crewmembers previously trained and qualified, but who have become unqualified due to not having met within the required period the recurrent training requirements of § 121.427 or the proficiency check requirements of § 121.441.]

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–104, Eff. 7/6/73); [(Amdt. 121–259, Eff. 8/1/96)]

§ 121.401 Training program: General.

(a) Each certificate holder shall—

(1) Establish, obtain the appropriate initial and final approval of, and provide, a training program that meets the requirements of this subpart and appendices E and F and that insures that each crewmember, aircraft dispatcher, flight instructor and check airman, and each person assigned duties for the carriage and handing of dangerous articles and magnetized materials, is adequately trained to perform his assigned duties.

(2) Provide adequate ground and flight training facilities and properly qualified ground instructors for the training required by this subpart;

(3) Provide and keep current with respect to each airplane type and, if applicable, the particular variations within that airplane type, appropriate training material, examinations, forms, instructions, and procedures for use in conducting the training and checks required by this part; and

(4) Provide enough flight instructors, simulator instructors, and approved check airmen to conduct required flight training and flight checks, and simulator training courses permitted under this part.

(c) Each instructor, supervisor, or check airman who is responsible for a particular ground training subject, segment of flight training, course of training, flight check, or competence check under this part shall certify as to the proficiency and knowledge of the crewmember, aircraft dispatcher, flight instructor, or check airman concerned upon completion of that training or check. That certification shall be made a part of the crewmember's or dispatcher's record. When the certification required by this paragraph is made by an entry in a computerized recordkeeping system, the certifying instructor, supervisor, or check airman must be identified with that entry. However, the signature of the certifying instructor, supervisor, or check airman is not required for computerized entries.

(d) Training subjects that are applicable to more than one airplane or crewmember position and that have been satisfactorily completed in connection with prior training for another airplane or another crewmember position, need not be repeated during subsequent training other than recurrent training.

(e) A person who progresses successfully through flight training, is recommended by his instructor or a check airman, and successfully completes the appropriate flight check for a check airman or the Administrator, need not complete the programmed hours of flight training for the particular airplane. However, whenever the Administrator finds that 20 percent of the flight checks given at a particular training base during the previous six months under this paragraph are unsuccessful, this paragraph may not be used by the certificate holder at that base until the Administrator finds that the effectiveness of the flight training there has improved.

In the case of a certificate holder using a course of training permitted in § 121.409(c), the Administrator may require the programmed hours of inflight training in whole or in part, until he finds the effectiveness of the flight training has improved as provided in paragraph (e) of this section.

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–104, Eff. 7/6/73); (Amdt. 121–143, Eff. 12/19/74); (Amdt. 121–1743 Eff. 6/26/78)

(b) A certificate holder may contract with, or otherwise arrange to use the services of, a training center certificated under part 142 of this chapter to provide training, testing, and checking required by this part only if the training center—

(1) Holds applicable training specifications issued under part 142 of this chapter;

(2) Has facilities, training equipment, and courseware meeting the applicable requirements of part 142 of this chapter;

(3) Has approved curriculums, curriculum segments, and portions of curriculum segments applicable for use in training courses required by this subpart; and

(4) Has sufficient instructor and check airmen qualified under the applicable requirements of §§ 121.411 or 121.413 to provide training, testing, and checking to persons subject to the requirements of this subpart.

(Amdt. 121–259, Eff. 8/1/96); [(Amdt. 121–263, Eff. 3/21/97)]

§ 121.403 Training program: Curriculum.

(a) Each certificate holder must prepare and keep current a written training program curriculum for each type of airplane with respect to dispatchers and each crewmember required for that type airplane. The curriculum must include ground and flight training required by this subpart.

(b) Each training program curriculum must include—

(1) A list of principal ground training subjects, including emergency training subjects, that are provided.

(2) A list of all the training devices, mockups, systems trainers, procedures trainers, or other training aids that the certificate holder will use.

(3) Detailed descriptions or pictorial displays of the approved normal, abnormal, and emergency maneuvers, procedures and functions that will be performed during each flight training phase or flight check, indicating those maneuvers, procedures and functions that are to be performed during the inflight portions of flight training and flight checks.

programmed hours of training.

(Amdt. 121–55, Eff. 2/2/70)

§ 121.404 Compliance dates: Crew and dispatcher resource management training.

After March 19, [1998], no certificate holder may use a person as a flight crewmember, and after March 19, 1999, no certificate holder may use a person as a flight attendant or aircraft dispatcher unless that person has completed approved crew resource management (CRM) or dispatcher resource management (DRM) initial training, as applicable, with that certificate holder or with another certificate holder.

Docket No. 19110 (53 FR 37696) Eff. 9/27/88

(Amdt. 121–199, Eff. 1/2/89); (Amdt. 121–250, Eff. 3/19/96); (Amdt. 121–253, Eff. 2/26/96); (Amdt. 121–253 Corrected, Eff. 3/11/96); [(Amdt. 121–256, Eff. 7/15/96)]

§ 121.405 Training program and revision: Initial and final approval.

(a) To obtain initial and final approval of a training program, or a revision to an approved training program, each certificate holder must submit to the Administrator—

(1) An outline of the proposed program or revision, including an outline of the proposed or revised curriculum, that provides enough information for a preliminary evaluation of the proposed training program or revised training program; and

(2) Additional relevant information as may be requested by the Administrator.

(b) If the proposed training program or revision complies with this subpart, the Administrator grants initial approval in writing after which the certificate holder may conduct the training in accordance with that program. The Administrator then evaluates the effectiveness of the training program and advises the certificate holder of deficiencies, if any, that must be corrected.

(c) The Administrator grants final approval of the training program or revision if the certificate holder's curriculum as set forth in § 121.403 that increase the quality and effectiveness of the teaching-learning process.

If approval of the reduced programmed hours of training is granted, the Administrator provides the certificate holder with a statement of the basis for the approval.

(e) Whenever the Administrator finds that revisions are necessary for the continued adequacy of a training program that has been granted final approval, the certificate holder shall, after notification by the Administrator, make any changes in the program that are found necessary by the Administrator. Within 30 days after the certificate holder receives such notice, it may file a petition to reconsider the notice with the [certificate-holding district office.]* The filing of a petition to reconsider stays the notice pending a decision by the Administrator. However, if the Administrator finds that there is an emergency that requires immediate action in the interest of safety in air transportation, he may, upon a statement of the reasons, require a change effective without stay.

[(f) Each certificate holder described in § 135.3(b) and (c) of this chapter must include the material required by § 121.403 in the manual required by § 135.21 of this chapter.

[(g) The Administrator may grant a deviation to certificate holders described in § 135.3(b) and (c) of this chapter to allow reduced programmed hours of ground training required by § 121.419 if it is found that a reduction is warranted based on the certificate holder's operations and the complexity of the make, model, and series of the aircraft used.]

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–207, Eff. 10/25/89); [(Amdt. 121–250, Eff. 3/19/96)]; [*(Amdt. 121–253, Eff. 2/26/96)]

§ 121.406 [Credit for previous CRM/DRM training.]

(a) For flightcrew members, the Administrator may credit CRM training received before March

19, 1999, toward all or part of the initial ground CRM training required by § 121.422.

(d) In granting credit for initial ground CRM or DRM training, the Administrator considers training aids, devices, methods, and procedures used by the certificate holder in a voluntary CRM or DRM program or in an AQP program that effectively meets the quality of an approved CRM or DRM initial ground training program under § 121.419, 121.421, or 121.422 as appropriate.

(Amdt. 121–250, Eff. 3/19/96); [(Amdt. 121–256, Eff. 7/15/96)]

§ 121.407 Training program: Approval of airplane simulators and other training devices.

(a) Each airplane simulator and other training device that is used in a training course permitted under § 121.409, in checks required under subpart O of this part or as permitted in appendices E and F to this part must—

(1) Be specifically approved for—

(i) The certificate holder;

(ii) The type airplane and, if applicable, the particular variation within type, for which the training or check is being conducted; and

(iii) The particular maneuver, procedure, or crewmember function involved.

(2) Maintain the performance, functional, and other characteristics that are required for approval.

(3) Be modified to confirm with any modification to the airplane being simulated that results in changes to performance, functional, or other characteristics required for approval.

(4) Be given a daily functional preflight check before being used.

(5) Have a daily discrepancy log kept with each discrepancy entered in that log by the appropriate instructor or check airman at the end of each training or check flight.

(b) A particular airplane simulator or other training device may be approved for use by more than one certificate holder.

that meets the training requirements of § 121.424(a) and (c) and appendix H of this part.

(d) An airplane simulator approved under this section must be used instead of the airplane to satisfy the pilot flight training requirements prescribed in the certificate holder's approved low-altitude windshear flight training program set forth in § 121.409(d) of this part.

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–161, Eff. 7/30/80); (Amdt. 121–199, Eff. 1/2/89)

§ 121.409 Training courses using airplane simulators and other training devices.

(a) Training courses utilizing airplane simulators and other training devices may be included in the certificate holder's approved training program for use as provided in this section.

(b) A course of training in an airplane simulator may be included for use as provided in § 121.441 if that course—

(1) Provides at least 4 hours of training at the pilot controls of an airplane simulator as well as a proper briefing before and after the training;

(2) Provides training in at least the procedures and maneuvers set forth in appendix F to this part; or

(3) Provides line-oriented training that—

(i) Utilizes a complete flight crew;

(ii) Includes at least the maneuvers and procedures (abnormal and emergency) that may be expected in line operations;

(iii) Is representative of the flight segment appropriate to the operations being conducted by the certificate holder; and

(4) Is given by an instructor who meets the applicable requirements of § 121.411.

The satisfactory completion of the course of training must be certified by either the Administrator or a qualified check airman.

(c) The programmed hours of flight training set forth in this subpart do not apply if the training program for the airplane type includes—

(1) A course of pilot training in an airplane simulator as provided in § 121.424(d); or

flight training program. The approved low-altitude windshear flight training, if applicable, must be included in each of the pilot flight training courses prescribed in §§ 121.409(b), 121.418, 121.424, and 121.427 of this part.

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–130, Eff. 11/26/76); (Amdt. 121–144, Eff. 6/26/78); (Amdt. 121–199, Eff. 1/2/89)

§ 121.411 [Qualifications: Check airmen (airplane) and check airmen (simulator).]

(a) [For the purposes of this section and § 121.413:

(1) A check airman (airplane) is a person who is qualified, and permitted, to conduct flight checks or instruction in an airplane, in a flight simulator, or in a flight training device for a particular type airplane.

(2) A check airman (simulator) is a person who is qualified to conduct flight checks or instruction, but only in a flight simulator or in a flight training device for a particular type airplane.

(3) Check airmen (airplane) and check airmen (simulator) are those check airmen who perform the functions described in § 121.401(a)(4).

(b) [No certificate holder may use a person, nor may any person serve as a check airman (airplane) in a training program established under this subpart unless, with respect to the airplane type involved, that person—

(1) Holds the airman certificates and ratings required to serve as a pilot in command, a flight engineer, or a flight navigator, as applicable, in operations under this part;

(2) Has satisfactorily completed the appropriate training phases for the airplane, including recurrent training, that are required to serve as a pilot in command, flight engineer, or flight navigator, as applicable, in operations under this part;

(3) Has satisfactorily completed the appropriate proficiency or competency checks that are required to serve as a pilot in command, flight

certificate as appropriate;

(6) Has satisfied the recency of experience requirements of § 121.439; and

(7) Has been approved by the Administrator for the check airman duties involved.

(c) [No certificate holder may use a person nor may any person serve as a check airman (simulator) in a training program established under this subpart unless, with respect to the airplane type involved, that person meets the provisions of paragraph (b) of this section, or—

(1) Holds the airman certificates and ratings, except medical certificate, required to serve as a pilot in command, a flight engineer, or a flight navigator, as applicable, in operations under this part;

(2) Has satisfactorily completed the appropriate training phases for the airplane, including recurrent training, that are required to serve as a pilot in command, flight engineer, or flight navigator in operations under this part;

(3) Has satisfactorily completed the appropriate proficiency or competency checks that are required to serve as a pilot in command, flight engineer, or flight navigator in operations under this part;

(4) Has satisfactorily completed the applicable training requirements of § 121.413; and

(5) Has been approved by the Administrator for the check airman (simulator) duties involved.

[(d) Completion of the requirements in paragraphs (b)(2), (3), and (4) or (c)(2), (3), and (4) of this section, as applicable, shall be entered in the individual's training record maintained by the certificate holder.

[(e) Check airmen who have reached their 60th birthday or who do not hold an appropriate medical certificate may function as check airmen, but may not serve as pilot flightcrew members in operations under this part.

[(f) A check airman (simulator) must accomplish the following—

(1) Fly at least two flight segments as a required crewmember for the type airplane involved within the 12-month period preceding

considered to be completed in the month required if completed in the calendar month before or in the calendar month after the month in which it is due.]

(Amdt. 121–55, Eff. 2/2/70); [(Amdt. 121–257, Eff. 6/17/96)]

[§ 121.412 Qualifications: Flight instructors (airplane) and flight instructors (simulator).

[(a) For the purposes of this section and § 121.414:

(1) A flight instructor (airplane) is a person who is qualified to instruct in an airplane, in a flight simulator, or in a flight training device for a particular type airplane.

(2) A flight instructor (simulator) is a person who is qualified to instruct, but only in a flight simulator, in a flight training device, or both, for a particular type airplane.

(3) Flight instructors (airplane) and flight instructors (simulator) are those instructors who perform the functions described in § 121.401(a)(4).

[(b) No certificate holder may use a person nor may any person serve as a flight instructor (airplane) in a training program established under this subpart unless, with respect to the airplane type involved, that person—

(1) Holds the airman certificates and ratings required to serve as a pilot in command, a flight engineer, or a flight navigator, as applicable, in operations under this part;

(2) Has satisfactorily completed the appropriate training phases for the airplane, including recurrent training, that are required to serve as a pilot in command, flight engineer, or flight navigator, as applicable, in operations under this part;

(3) Has satisfactorily completed the appropriate proficiency or competency checks that are required to serve as a pilot in command, flight engineer, or flight navigator, as applicable, in operations under this part;

(4) Has satisfactorily completed the applicable training requirements of § 121.414, including in-

[(c) No certificate holder may use a person, nor may any person serve as a flight instructor (simulator) in a training program established under this subpart, unless, with respect to the airplane type involved, that person meets the provisions of paragraph (b) of this section, or—

(1) Holds the airman certificates and ratings, except medical certificate, required to serve as a pilot in command, a flight engineer, or a flight navigator, as applicable, in operations under this part except before February 19, 1997 that person need not hold a type rating for the airplane type involved provided that he or she only provides the instruction described in §§ 121.409(b) and 121.441;

(2) Has satisfactorily completed the appropriate training phases for the airplane, including recurrent training, that are required to serve as a pilot in command, flight engineer, or flight navigator, as applicable, in operations under this part;

(3) Has satisfactorily completed the appropriate proficiency or competency checks that are required to serve as a pilot in command, flight engineer, or flight navigator, as applicable, in operations under this part; and

(4) Has satisfactorily completed the applicable training requirements of § 121.414.

[(d) Completion of the requirements in paragraphs (b)(2), (3), and (4) or (c)(2), (3), and (4) of this section as applicable shall be entered in the individual's training record maintained by the certificate holder.

[(e) Airmen who have reached their 60th birthday, or who do not hold an appropriate medical certificate, may not function as a flight instructor (airplane), nor may they serve as pilot flightcrew members in operations under this part.

[(f) A flight instructor (simulator) must accomplish the following—

(1) Fly at least two flight segments as a required crewmember for the type of airplane within the 12-month period preceding the performance of any flight instructor duty in a flight simulator (and must hold a Class I or Class II medical certificate as appropriate); or

month after the month in which it is due.]

[(Amdt. 121–257, Eff. 6/17/96)]

§ 121.413 [Initial and transition training and checking requirements: Check airmen (airplane), check airmen (simulator).

(a) [No certificate holder may use a person nor may any person serve as a check airman unless—

(1) That person has satisfactorily completed initial or transition check airman training; and

(2) Within the preceding 24 calendar months that person satisfactorily conducts a proficiency or competency check under the observation of an FAA inspector or an aircrew designated examiner employed by the operator. The observation check may be accomplished in part or in full in an airplane, in a flight simulator, or in a flight training device. This paragraph applies after February 19, 1997.

(b) [The observation check required by paragraph (a)(2) of this section is considered to have been completed in the month required if completed in the calendar month before, or the calendar month after, the month in which it is due.

(c) [The initial ground training for check airmen must include the following:

(1) Check airman duties, functions, and responsibilities.

(2) The applicable Code of Federal Regulations and the certificate holder's policies and procedures.

(3) The appropriate methods, procedures, and techniques for conducting the required checks.

(4) Proper evaluation of student performance including the detection of—

(i) Improper and insufficient training; and

(ii) Personal characteristics of an applicant that could adversely affect safety.

(5) The appropriate corrective action in the case of unsatisfactory checks.

(6) The approved methods, procedures, and limitations for performing the required normal, [(c) The initial and transition flight training for pilot check airmen (airplane), flight engineer check airmen (airplane), and flight navigator check airmen (airplane) must include the following:

(1) The safety measures for emergency situations that are likely to develop during a check.

(2) The potential results of improper, untimely, or non-execution of safety measures during a check.

(3) For pilot check airman (airplane)—

(i) Training and practice in conducting flight checks from the left and right pilot seats in the required normal, abnormal, and emergency procedures to ensure competence to conduct the pilot flight checks required by this part; and

(ii) The safety measures to be taken from either pilot seat for emergency situations that are likely to develop during a check.

(4) For flight engineer check airmen (airplane) and flight navigator check airmen (airplane), training to ensure competence to perform assigned duties.

[(f) The requirements of paragraph (e) of this section may be accomplished in full or in part in flight, in a flight simulator, or in a flight training device, as appropriate.

[(g) The initial and transition flight training for check airmen (simulator) must include the following:

(1) Training and practice in conducting flight checks in the required normal, abnormal, and emergency procedures to ensure competence to conduct the flight checks required by this part. This training and practice must be accomplished in a flight simulator or in a flight training device.

(2) Training in the operation of flight simulators or flight training devices, or both, to ensure competence to conduct the flight checks required by this part.]

(Amdt. 121–55, Eff. 2/2/70); [(Amdt. 121–257, Eff. 6/17/96)]

(2) Within the preceding 24 calendar months, that person satisfactorily conducts instruction under the observation of an FAA inspector, an operator check airman, or an aircrew designated examiner employed by the operator. The observation check may be accomplished in part or in full in an airplane, in a flight simulator, or in a flight training device. This paragraph applies after February 19, 1997.

[(b) The observation check required by paragraph (a)(2) of this section is considered to have been completed in the month required if completed in the calendar month before, or the calendar month after, the month in which it is due.

[(c) The initial ground training for flight instructors must include the following:

(1) Flight instructor duties, functions, and responsibilities.

(2) The applicable Code of Federal Regulations and the certificate holder's policies and procedures.

(3) The appropriate methods, procedures, and techniques for conducting flight instruction.

(4) Proper evaluation of student performance including the detection of—

(i) Improper and insufficient training; and

(ii) Personal characteristics of an applicant that could adversely affect safety.

(5) The corrective action in the case of unsatisfactory training progress.

(6) The approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures in the airplane.

(7) Except for holders of a flight instructor certificate—

(i) The fundamental principles of the teaching-learning process;

(ii) Teaching methods and procedures; and

(iii) The instructor-student relationship.

[(d) The transition ground training for flight instructors must include the approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures in the airplane. This training must include—

(1) The potential results of improper, untimely, or non-execution of safety measures during instruction.

(3) For pilot flight instructor (airplane)—

(i) In-flight training and practice in conducting flight instruction from the left and right pilot seats in the required normal, abnormal, and emergency procedures to ensure competence as an instructor; and

(ii) The safety measures to be taken from either pilot seat for emergency situations that are likely to develop during instruction.

(4) For flight engineer instructors (airplane) and flight navigator instructors (airplane), in-flight training to ensure competence to perform assigned duties.

[(f) The requirements of paragraph (e) of this section may be accomplished in full or in part in flight, in a flight simulator, or in a flight training device, as appropriate.

[(g) The initial and transition flight training for flight instructors (simulator) must include the following:

(1) Training and practice in the required normal, abnormal, and emergency procedures to ensure competence to conduct the flight instruction required by this part. This training and practice must be accomplished in full or in part in a flight simulator or in a flight training device.

(2) Training in the operation of flight simulators or flight training devices, or both, to ensure competence to conduct the flight instruction required by this part.]

[(Amdt. 121–257, Eff. 6/17/96)]

§ 121.415 Crewmember and dispatcher training requirements.

(a) Each training program must provide the following ground training as appropriate to the particular assignment of the crewmember or dispatcher—

(1) Basic indoctrination ground training for newly hired crewmembers or dispatchers including 40 programmed hours of instruction, unless reduced under § 121.405 or as specified in § 121.401(d), in at least the following—

holder's operating manual.

(2) The initial and transition ground training specified in §§ 121.419 through 121.422, as applicable.

(3) Emergency training as specified in § 121.417 (not required for dispatchers).

(b) Each training program must provide the flight training specified in §§ 121.424 through 121.426, as applicable.

(c) Each training program must provide recurrent ground and flight training as provided in § 121.427.

(d) Each training program must provide the differences training specified in § 121.418 if the Administrator finds that, due to differences between airplanes of the same type operated by the certificate holder, additional training is necessary to ensure that each crewmember and dispatcher is adequately trained to perform his assigned duties.

(e) Upgrade training as specified in §§ 121.419 and 121.424 for a particular type airplane may be included in the training program for crewmembers who have qualified and served as second in command pilot or flight engineer on that airplane.

(f) Particular subjects, maneuvers, procedures or parts thereof specified in §§ 121.419 through 121.425 for transition or upgrade training, as applicable, may be omitted, or the programmed hours of ground instruction or inflight training may be reduced, as provided in § 121.405.

(g) In addition to initial, transition, upgrade, recurrent and differences training, each training program must also provide ground and flight training, instruction, and practice as necessary to ensure that each crewmember and dispatcher—

(1) Remains adequately trained and currently proficient with respect to each airplane, crewmember position, and type of operation in which he serves; and

(2) Qualifies in new equipment, facilities, procedures, and techniques, including modifications to airplanes.

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–130, Eff. 11/26/76)

ing—

(1) Instruction in emergency assignments and procedures, including coordination among crewmembers.

(2) Individual instruction in the location, function, and operation of emergency equipment including—

(i) Equipment used in ditching and evacuation;

(ii) First aid equipment and its proper use;

(iii) Portable fire extinguishers, with emphasis on type of extinguisher to be used on different classes of fires; and

(iv) Emergency exits in the emergency mode with the evacuation slide/raft pack attached (if applicable), with training emphasis on the operation of the exits under adverse conditions.

(3) Instruction in the handling of emergency situations including—

(i) Rapid decompression;

(ii) Fire in flight or on the surface, and smoke control procedures with emphasis on electrical equipment and related circuit breakers found in cabin areas including all galleys, service centers, lifts, lavatories and movie screens;

(iii) Ditching and other evacuations, including the evacuation of persons and their attendants, if any, who may need the assistance of another person to move expeditiously to an exit in the event of an emergency;

(iv) Illness, injury, or other abnormal situations involving passengers or crewmembers to include familiarization with the emergency medical kit; and

(v) Hijacking and other unusual situations.

(4) Review and discussion of previous aircraft accidents and incidents pertaining to actual emergency situations.

(c) Each crewmember must accomplish the following emergency training during the specified training periods, using those items of installed emergency equipment for each type of airplane in which he or she is to serve (Alternate recurrent

using at least one type of installed hand fire extinguisher or approved fire extinguisher that is appropriate for the type of actual fire or simulated fire to be fought while using the type of installed PBE required by § 121.337 or approved PBE simulation device as defined by paragraph (d) of this section for combating fires aboard airplanes;]

(ii) [At least one approved firefighting drill in which the crewmember combats an actual fire using at least one type of installed hand fire extinguisher or approved fire extinguisher that is appropriate for the type of fire to be fought. This firefighting drill is not required if the crewmember performs the PBE drill of paragraph (c)(1)(i) by combatting an actual fire; and]

([iii]) An emergency evacuation drill with each person egressing the airplane or approved training device using at least one type of installed emergency evacuation slide. The crewmember may either observe the airplane exits being opened in the emergency mode and the associated exit slide/raft pack being deployed and inflated, or perform the tasks resulting in the accomplishment of these actions.

(2) Additional emergency drill requirements to be accomplished during initial training and once each 24 calendar months during recurrent training. Each crewmember must—

(i) Perform the following emergency drills and operate the following equipment—

(A) Each type of emergency exit in the normal and emergency modes, including the actions and forces required in the deployment of the emergency evacuation slides;

(B) Each type of installed hand fire extinguisher:

(C) Each type of emergency oxygen system to include protective breathing equipment;

(D) Donning, use, and inflation of individual flotation means, if applicable; and

(5) Use of life-lines; and

(6) Boarding of passengers and crew into raft or a slide/raft pack.

(ii) Observe the following drills—

(A) Removal from the airplane (or training device) and inflation of each type of life raft, if applicable;

(B) Transfer of each type of slide/raft pack from one door to another;

(C) Deployment, inflation, and detachment from the airplane (or training device) of each type of slide/raft pack; and

(D) Emergency evacuation including the use of a slide.

(d) [After September 1, 1993, no crewmember may serve in operations under this part unless that crewmember has performed the PBE drill and the firefighting drill described by paragraph (c)(1)(i) and (c)(1)(ii) of this section, as part of a one-time training requirement of paragraphs (c)(1) or (c)(2) of this section as appropriate. Any crewmember who performs the PBE drill and the firefighting drill prescribed in paragraphs (c)(1)(i) and (c)(1)(ii) of this section after May 26m 1987, is deemed to be in compliance with this regulation upon presentation of information or documentation, in a form and manner acceptable to the Director, Flight Standards Service, showing that the appropriate drills have been accomplished.]

(e) Crewmembers who serve in operation above 25,000 feet must receive instruction in the following—

(1) Respiration.

(2) Hypoxia.

(3) Duration of consciousness without supplemental oxygen at altitude.

(4) Gas expansion.

(5) Gas bubble formation.

(6) Physical phenomena and incidents of decompression.

(f) [For the purposes of this section the following definitions apply;

[(1) *Actual fire* means an ignited combustible material, in controlled conditions, of sufficient magnitude and duration to accomplish the training

requirements of § 121.417(c).

(4) *Combats,* in this context, means to properly fight an actual or simulated fire using an appropriate type of fire extinguisher until that fire is extinguished.

(5) *Observe* means to watch without participating actively in the drill.

(6) *PBE drill* means an emergency drill in which a crewmember demonstrates the proper use of protective breathing equipment while fighting an actual or simulated fire.

(7) *Perform* means to satisfactorily accomplish a prescribed emergency drill using established procedures that stress the skill of the persons involved in the drill.

(8) *Simulated fire* means an artificial duplication of smoke or flame used to create various aircraft firefighting scenarios, such as lavatory, galley oven, and aircraft seat fires.]

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–133, Eff. 5/16/77); (Amdt. 121–144, Eff. 2/26/78); (Amdt. 121–146, Eff. 6/22/78); (Amdt. 121–148, Eff. 9/29/78); (Amdt. 121–151, Eff. 4/23/79); (Amdt. 121–179, Eff. 10/1/82); (Amdt. 121–188, Eff. 8/1/86); (Amdt. 121–193, Eff. 7/6/87); (Amdt. 121–204, Eff. 5/22/89); (Amdt. 121–220, Eff. 12/11/90); [(Amdt. 121–234, Eff. 9/1/93)]

§ 12.418 Differences training: Crewmembers and dispatchers.

(a) Differences training for crewmembers and dispatchers must consist of at least the following as applicable to their assigned duties and responsibilities—

(1) Instruction in each appropriate subject or part thereof required for initial ground training in the airplane unless the Administrator finds that particular subjects are not necessary.

(2) Flight training in each appropriate maneuver or procedure required for initial flight training in the airplane unless the Administrator finds that particular maneuvers or procedures are not necessary.

(3) The number of programmed hours of ground and flight training determined by the

§ 121.419 Pilots and flight engineers: Initial, transition, and upgrade ground training.

(a) Initial, transition, and upgrade ground training for pilots and flight engineers must include instruction in at least the following as applicable to their assigned duties—

(1) General subjects—

(i) The certificate holder's dispatch or flight release procedures;

(ii) Principles and methods for determining weight and balance, and runway limitations for takeoff and landing;

(iii) Enough meteorology to ensure a practical knowledge of weather phenomena, including the principles of frontal systems, icing, fog, thunderstorms, and high altitude weather situations;

(iv) Air traffic control systems, procedures, and phraseology;

(v) Navigation and the use of navigation aids, including instrument approach procedures;

(vi) Normal and emergency communication procedures;

(vii) [Visual cues prior to and during descent below DH or MDA;

[(viii) Approved crew resource management initial training; and]

[(ix)] Other instructions as necessary to ensure his competence.

(2) For each airplane type—

(i) A general description;

(ii) Performance characteristics;

(iii) Engines and propellers;

(iv) Major components;

(v) Major airplane systems (i.e., flight controls, electrical, hydraulic); other systems as appropriate; principles of normal, abnormal, and emergency operations; appropriate procedures and limitations;

(vi) Procedures for—

(A) Recognizing and avoiding severe weather situations;

(viii) Fuel consumption and cruise control;

(ix) Flight planning;

(x) Each normal and emergency procedure; and

(xi) The approved Airplane Flight Manual.

(b) Initial ground training for pilots and flight engineers must consist of at least the following programmed hours of instruction in the required subjects specified in paragraph (a) of this section and in § 121.415(a) unless reduced under § 121.405—

(1) Group I airplanes—

(i) Reciprocating powered, 64 hours; and

(ii) Turbopropeller powered, 80 hours.

(2) Group II airplanes, 120 hours.

(Amdt. 121–10, Eff. 8/16/65); (Amdt. 121–24, Eff. 4/15/67); (Amdt. 121–26, Eff. 4/15/67); (Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–199, Eff. 1/2/89); [(Amdt. 121-250, Eff. 3/19/96)]

§ 121.420 Flight navigators: Initial and transition ground training.

(a) Initial and transition ground training for flight navigators must include instruction in the subjects specified in § 121.419(a) as appropriate to his assigned duties and responsibilities and in the following with respect to the particular type airplane—

(1) Limitations on climb, cruise, and descent speeds.

(2) Each item of navigational equipment installed including appropriate radio, radar, and other electronic equipment.

(3) Airplane performance.

(4) Airspeed, temperature, and pressure indicating instruments or systems.

(5) Compass limitations and methods of compensation.

(6) Cruise control charts and data, including fuel consumption rates.

(7) Any other instruction as necessary to ensure his competence.

(b) Initial ground training for flight navigators must consist of at least the following programmed hours of instruction in the subjects specified in

§ 121.421 Flight attendants: Initial and transition ground training.

(a) Initial and transition ground training for flight attendants must include instruction in at least the following—

(1) General subjects—

(i) [The authority of the pilot-in-command;

(ii) [Passenger handling, including the procedures to be followed in the case of deranged persons or other persons whose conduct might jeopardize safety; and

[(iii) Approved crew resource management initial training.]

(2) For each airplane type—

(i) A general description of the airplane emphasizing physical characteristics that may have a bearing on ditching, evacuation, and inflight emergency procedures and on other related duties;

(ii) The use of both the public address system and the means of communicating with other flight crewmembers, including emergency means in the case of attempted hijacking or other unusual situations; and

(iii) Proper use of electrical galley equipment and the controls for cabin heat and ventilation.

(b) Initial and transition ground training for flight attendants must include a competence check to determine ability to perform assigned duties and responsibilities.

(c) Initial ground for flight attendants must consist of at least the following programmed hours of instruction in the subjects specified in paragraph (a) of this section and in § 121.415(a) unless reduced under—

(1) Group I airplanes—

(i) Reciprocating powered, 8 hours; and

(ii) Turbopropeller powered, 8 hours;

(2) Group II airplanes, 16 hours.

(Amdt. 121–55, Eff. 2/2/70); [(Amdt. 121–250, Eff. 3/19/96)]

appropriate normal and emergency procedures;

(ii) Meteorology, including various types of meteorological information and forecasts, interpretation of weather data (including forecasting of en route and terminal temperatures and other weather conditions), frontal systems, wind conditions, and use of actual and prognostic weather charts for various altitudes;

(iii) The NOTAM system;

(iv) Navigational aids and publications;

(v) Joint dispatcher-pilot responsibilities;

(vi) Characteristics of appropriate airports;

(vii) [Prevailing weather phenomena and the available sources of weather information;

(viii) [Air traffic control and instrument approach procedures; and

[(ix) Approved dispatcher resource management (DRM) initial training.]

(2) For each airplane—

(i) A general description of the airplane emphasizing operating and performance characteristics, navigation equipment, instrument approach and communication equipment, emergency equipment and procedures, and other subjects having a bearing on dispatcher duties and responsibilities;

(ii) Flight operation procedures including procedures specified in § 121.419 (a)(2)(vi);

(iii) Weight and balance computations;

(iv) Basic airplane performance dispatch requirements and procedures;

(v) Flight planning including track selection, flight time analysis, and fuel requirements; and

(vi) Emergency procedures.

(3) Emergency procedures must be emphasized, including the alerting of proper governmental, company, and private agencies during emergencies to give maximum help to an airplane in distress.

(b) Initial and transition ground training for aircraft dispatchers must include a competence check given by an appropriate supervisor or ground instructor that demonstrates knowledge and ability with the subjects set forth in paragraph (a) of this section.

(Amdt. 121–55, Eff. 2/2/70); [(Amdt. 121–250, Eff. 3/19/96)]

§ 121.424 Pilots: Initial, transition, and upgrade flight training.

(a) Initial, transition, and upgrade training for pilots must include flight training and practice in the maneuvers and procedures set forth in the certificate holder's approved low-altitude windshear flight training program and in appendix E to this part, as applicable.

(b) The maneuvers and procedures required by paragraph (a) of this section must be performed inflight except—

(1) That windshear maneuvers and procedures must be performed in a simulator in which the maneuvers and procedures are specifically authorized to be accomplished; and

(2) To the extent that certain maneuvers and procedures may be performed in an airplane simulator, an appropriate training device, or a static airplane as permitted in appendix E to this part.

(c) Except as permitted in paragraph (d) of this section, the initial flight training required by paragraph (a) of this section must include at least the following programmed hours of inflight training and practice unless reduced under § 121.405—

(1) Group I airplanes—

(i) Reciprocating powered. Pilot in command, 10 hours; second in command, 6 hours; and

(ii) Turbopropeller powered. Pilot in command, 15 hours; second in command, 7 hours.

(2) Group II airplanes. Pilot in command, 20 hours; second in command, 10 hours.

(d) If the certificate holder's approved training program includes a course of training utilizing an airplane simulator under § 121.409 (c) and (d) of this part, each pilot must successfully complete—

(1) With respect to § 121.409(c) of this part—

(i) Training and practice in the simulator in at least all of the maneuvers and procedures set forth in appendix E to this part for initial flight training that are capable of being performed in

(2) With respect to § 121.409(d) of this part, training and practice in at least the maneuvers and procedures set forth in the certificate holder's approved low-altitude windshear flight training program that are capable of being performed in an airplane simulator in which the maneuvers and procedures are specifically authorized.

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–199, Eff. 1/2/89)

§ 121.425 Flight engineers: Initial and transition flight training.

(a) Initial and transition flight training for flight engineers must include at least the following—

(1) Training and practice in procedures related to the carrying out of flight engineer duties and functions. This training and practice may be accomplished either inflight, in an airplane simulator, or in a training device.

(2) A flight check that includes—

(i) Preflight inspection;

(ii) Inflight performance of assigned duties accomplished from the flight engineer station during taxi, runup, takeoff, climb, cruise, descent, approach, and landing;

(iii) Accomplishment of other functions, such as fuel management and preparation of fuel consumption records, and normal and emergency or alternate operation of all airplane flight systems, performed either inflight, in an airplane simulator, or in a training device.

Flight engineers possessing a commercial pilot certificate with an instrument, category and class rating, or pilots already qualified as second in command and reverting to flight engineer, may complete the entire flight check in an approved airplane simulator.

(b) Except as permitted in paragraph (c) of this section, the initial flight training required by paragraph (a) of this section must include at least the same number of programmed hours of flight training and practice that are specified for a second in command pilot under § 121.424(c) unless reduced under § 121.405.

of proficiency in the assigned duties, procedures, and functions.

(Amdt. 121–3, Eff. 4/1/65); (Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–144, Eff. 6/26/78)

§ 121.426 Flight navigators: Initial and transition flight training.

(a) Initial and transition flight training for flight navigators must include flight training and a flight check that are adequate to ensure his proficiency in the performance of his assigned duties.

(b) The flight training and checks specified in paragraph (a) of this section must be performed—

(1) Inflight or in an appropriate training device; or

(2) In operations under this part if performed under supervision of a qualified flight navigator.

(Amdt. 121–55, Eff. 2/2/70)

§ 121.427 Recurrent training.

(a) Recurrent training must ensure that each crewmember or dispatcher is adequately trained and currently proficient with respect to the type airplane (including differences training, if applicable) and crewmember position involved.

(b) Recurrent ground training for crewmembers and dispatchers must include at least the following—

(1) A quiz or other review to determine the state of the crewmember's or dispatcher's knowledge with respect to the airplane and position involved.

(2) Instruction as necessary in the subjects required for initial ground training by § 121.415(a), as appropriate, including emergency training (not required for aircraft dispatchers).

(3) For flight attendants and dispatchers, a competence check as required by §§ 121.421(b) and 121.422(b), respectively.

[(4) Approved recurrent CRM training. For flight crewmembers, this training or portions thereof may be accomplished during an approved simulator line operational flight training (LOFT) session. The recurrent CRM training requirement

(i) Group I, reciprocating powered airplanes, 16 hours;

(ii) Group I turbopropeller powered airplanes, 20 hours; and

(iii) Group II airplanes, 25 hours.

(2) For flight navigators—

(i) Group I reciprocating powered airplanes, 12 hours;

(ii) Group I turbopropeller powered airplanes, 16 hours; and

(iii) Group II airplanes, 16 hours.

(3) For flight attendants—

(i) Group I reciprocating powered airplanes, 4 hours;

(ii) Group I turbopropeller powered airplanes, 5 hours; and

(iii) Group II airplanes, 12 hours.

(4) For aircraft dispatchers—

(i) Group I reciprocating powered airplanes, 8 hours;

(ii) Group I turbopropeller powered airplanes, 10 hours; and

(iii) Group II airplanes, 20 hours.

(d) Recurrent flight training for flight crewmembers must include at least the following—

(1) For pilots, flight training in an approved simulator in maneuvers and procedures set forth in the certificate holder's approved low-altitude windshear flight training program and flight training in maneuvers and procedures set forth in appendix F to this part, or in a flight training program approved by the Administrator, except as follows—

(i) The number of programmed inflight hours is not specified; and

inspection, may be conducted in an airplane simulator or other training device. The preflight inspection may be conducted in an airplane, or by using an approved pictorial means that realistically portrays the location and detail of preflight inspection items and provides for the portrayal of abnormal conditions. Satisfactory completion of an approved line-oriented simulator training program may be substituted for the flight check.

(3) For flight navigators, enough inflight training and an inflight check to ensure competency with respect to operating procedures and navigation equipment to be used and familiarity with essential navigation information pertaining to the certificate holder's routes that require a flight navigator.

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–80, Eff. 11/4/71); (Amdt. 121–144, Eff. 6/26/78); (Amdt. 121–199, Eff. 1/2/89); [(Amdt. 121–250, Eff. 3/19/96)]

§ 121.429 Prohibited drugs.

(a) Each certificate holder shall provide each employee performing a function listed in appendix I to this part and his or her supervisor with the training specified in that appendix.

(b) No certificate holder may use any contractor to perform a function listed in appendix I to this part unless that contractor provides each of its employees performing that function for the certificate holder and his or her supervisor with the training specified in that appendix.

Docket No. 25148 (53 FR 47057) Eff. 11/21/88 (Amdt. 121–200, Eff. 12/21/88)

§ 121.431 Applicability.

(a) This subpart:

(1) Prescribes crewmember qualifications for all certificate holders except where otherwise specified. The qualification requirements of this subpart also apply to each certificate holder that conducts commuter operations under part 135 of this chapter with airplanes for which two pilots are required by the aircraft type certification rules of this chapter. The Administrator may authorize any other certificate holder that conducts operations under part 135 of this chapter to comply with the training and qualification requirements of this subpart instead of subparts E, G, and H of part 135 of this chapter, except that these certificate holders may choose to comply with the operating experience requirements of § 135.344 of this chapter, instead of the requirements of § 121.434; and

(2) Permits training center personnel authorized under part 142 of this chapter who meet the requirements of §§ 121.411 [through 121.414] to provide training, testing and checking under contract or other arrangement to those persons subject to the requirements of this subpart.

(b) For the purpose of this subpart, the airplane groups and terms and definitions prescribed in § 121.400 and the following definitions apply:

Consolidation is the process by which a person through practice and practical experience increases proficiency in newly acquired knowledge and skills.

Line operating flight time is flight time performed in operations under this part.

Operating cycle is a complete flight segment consisting of a takeoff, climb, enroute portion, descent, and a landing.

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–74, Eff. 7/30/71); (Amdt. 121–248, Eff. 8/25/95); (Amdt. 121–250, Eff. 3/19/96); (Amdt. 121–256, Eff. 7/15/96); (Amdt. 121–259, Eff. 8/1/96); [(Amdt. 121–263, Eff. 3/21/97)]

§ 121.432 General.

(a) Except in the case of operating experience under § 121.434, a pilot who serves as second in command of an operation that requires three or more pilots must be fully qualified to act as pilot in command of that operation.

(b) No certificate holder may conduct a check or any training in operations under this part, except for the following checks and training required by this part or the certificate holder—

(1) Line checks for pilots.

(2) Flight navigator training conducted under the supervision of a flight navigator flight instructor.

(3) Flight navigator flight checks.

(4) Flight engineer checks (except for emergency procedures), if the person being checked is qualified and current in accordance with § 121.453(a).

(5) Flight attendant training and competence checks.

Except for pilot line checks and flight engineer flight checks, the person being trained or checked may not be used as a required crewmember.

(c) For the purposes of this subpart, the airplane groups prescribed in § 121.400 apply.

(d) For the purposes of this subpart, the terms and definitions in § 121.400 apply.

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–130, Eff. 11/26/76)

§ 121.433 Training required.

(a) *Initial training.* No certificate holder may use any person nor may any person serve as a required crewmember on an airplane unless that person has satisfactorily completed, in a training program approved under subpart N of this part, initial ground and flight training for that type airplane and for the particular crewmember position, except as follows—

(1) Crewmembers who have qualified and served as a crewmember on another type airplane of the same group may serve in the same crewmember capacity upon completion of transition training as provided in § 121.415.

(2) Crewmembers who have qualified and served as second in command or flight engineer on a particular type airplane may serve as pilot

unless that person has satisfactorily completed, with respect to both the crewmember position and the particular variation of the airplane in which he serves, either initial or transition ground and flight training, or differences training, as provided in § 121.415.

(c) *Recurrent training.*

(1) No certificate holder may use any person nor may any person serve as a required crewmember on an airplane unless, within the preceding 12 calendar months—

(i) For flight crewmembers, he has satisfactorily completed recurrent ground and flight training for that airplane and crewmember position and a flight check, as applicable;

(ii) For flight attendants and dispatchers, he has satisfactorily completed recurrent ground training and a competence check; and

(iii) In addition, for pilots in command, he has satisfactorily completed, within the preceding 6 calendar months, recurrent flight training in addition to the recurrent flight training required in paragraph (c)(1)(i) of this section, in an airplane in which he serves as pilot in command in operations under this part.

(2) For pilots, a proficiency check as provided in § 121.441 of this part may be substituted for the recurrent flight training required by this paragraph and the approved simulator course of training under § 121.409(b) of this part may be substituted for alternate periods of recurrent flight training required in that airplane, except as provided in paragraphs (d) and (e) of this section.

(d) For each airplane in which a pilot serves as pilot in command, he must satisfactorily complete either recurrent flight training or a proficiency check within the preceding 12 calendar months.

(e) Notwithstanding paragraphs (c)(2) and (d) of this section, a proficiency check as provided in § 121.441 of this part may not be substituted for training in those maneuvers and procedures set forth in a certificate holder's approved low-altitude windshear flight training program when that pro-

cles and magnetized materials.

(a) No certificate holder may use any person to perform and no person may perform, any assigned duties and responsibilities for the handling or carriage of dangerous articles and magnetized materials governed by Title 49 CFR, unless within the preceding 12 calendar months that person has satisfactorily completed training in a program established and approved under this subpart which includes instructions regarding the proper packaging, marking, labeling, and documentation of dangerous articles and magnetized materials, as required by Title 49 CFR and instructions regarding their compatibility, loading, storage, and handling characteristics. A person who satisfactorily completes training in the calendar month before, or the calendar month after, the month in which it becomes due, is considered to have taken that training during the month it became due.

(b) Each certificate holder shall maintain a record of the satisfactory completion of the initial and recurrent training given to crewmembers and ground personnel who perform assigned duties and responsibilities for the handling and carriage of dangerous articles and magnetized materials.

(c) A certificate holder operating in a foreign country where the loading and unloading of aircraft must be performed by personnel of the foreign country, may use personnel not meeting the requirements of paragraphs (a) and (b) of this section if they are supervised by a person qualified under paragraphs (a) and (b) of this section to supervise the loading, offloading and handling of hazardous materials.

Docket No. 12124 (38 FR 14915) Eff. 6/7/73

(Amdt. 121–104, Eff. 7/6/73); (Amdt. 121–130, Eff. 11/26/76); (Amdt. 121–144, Eff. 6/26/78)

§ 121.434 [Operating experience, operating cycles, and consolidation of knowledge and skills.]

(a) [No certificate holder may use a person nor may any person serve as a required crewmember

pose of meeting the requirements of this section.

(2) Pilots who are meeting the pilot-in-command requirements may serve as second in command.

[(3) Separate operating experience, operating cycles, and line operating flight time for consolidation of knowledge and skills are not required for variations within the same type airplane.]

(b) [In acquiring the operating experience, operating cycles, and line operating flight time for consolidation of knowledge and skills, crewmembers must comply with the following:]

(1) In the case of a flight crewmember, he must hold the appropriate certificates and ratings for the crewmember position and the airplane, except that a pilot who is meeting the pilot-in-command requirements must hold the appropriate certificates and ratings for a pilot in command in the airplane.

(2) [The operating experience, operating cycles, and line operating flight time for consolidation of knowledge and skills must be acquired after satisfactory completion of the appropriate ground and flight training for the particular airplane type and crewmember position.]

(3) The experience must be acquired in flight during operations under this part. However, in the case of an aircraft not previously used by the certificate holder in operations under this part, operating experience acquired in the aircraft during proving flights or ferry flights may be used to meet this requirement.

(c) Pilot crewmembers must acquire operating experience [and operating cycles] as follows:

(1) A pilot in command must—

(i) Perform the duties of a pilot in command under the supervision of a check pilot; and

(ii) [In addition, if a qualifying pilot in command is completing initial or upgrade training specified in § 121.424, be observed in the performance of prescribed duties by an FAA inspector during at least one flight leg which includes a takeoff and landing.] During the time that a qualifying pilot in command is acquiring the operating experience in paragraph (c)(1)(i) and (ii) of this section, a check pilot that he is qualified to perform the duties of a pilot in command of that type of airplane.

(2) [A second in command pilot must perform the duties of a second in command under the supervision of an appropriately qualified check pilot.

(3) [The hours of operating experience and operating cycles for all pilots are as follows:

(i) [For initial training, 15 hours in Group I reciprocating powered airplanes, 20 hours in Group I turbopropeller powered airplanes, and 25 hours in Group II airplanes. Operating experience in both airplane groups must include at least 4 operating cycles (at least 2 as the pilot flying the airplane).

(ii) [For transition training, except as provided in paragraph (c)(3)(iii) of this section, 10 hours in Group I reciprocating powered airplanes, 12 hours in Group I turbopropeller powered airplanes, 25 hours for pilots in command in Group II airplanes, and 15 hours for second in command pilots in Group II airplanes. Operating experience in both airplane groups must include at least 4 operating cycles (at least 2 as the pilot flying the airplane).]

(iii) In the case of transition training where the certificate holder's approved training program includes a course of training in an airplane simulator under § 121.409(c), each pilot in command must comply with the requirements prescribed in paragraph (c)(3)(i) of this section for initial training.

(d) A flight engineer must perform the duties of a flight engineer under the supervision of a check airman or a qualified flight engineer for at least the following number of hours—

(1) Group I reciprocating powered airplanes, 8 hours.

(2) Group I turbopropeller powered airplanes, 10 hours.

(3) Group II airplanes, 12 hours.

(e) A flight attendant must, for at least 5 hours, perform the assigned duties of a flight attendant under the supervision of a flight attendant supervisor qualified under this part who personally

experience may not be assigned as a required crewmember. Flight attendants who have satisfactorily completed training time acquired in an approved training program conducted in a full-scale (except for length) cabin training device of the type airplane in which they are to serve may substitute this time for 50 percent of the hours required by this paragraph.

(f) [Flight crewmembers may substitute one additional takeoff and landing for each hour of flight to meet the operating experience requirements of this section, up to a maximum reduction of 50% of flight hours, except those in Group II initial training, and second in command pilots in Group II transition training. Notwithstanding the reductions in programmed hours permitted under §§ 121.405 and 121.409, the hours of operating experience for flight crewmembers are not subject to reduction other than as provided in this paragraph and paragraph (e) of this section.]

[(g) Except as provided in paragraph (h) of this section, pilot-in-command and second-in-command crewmembers must each acquire at least 100 hours of line operating flight time for consolidation of knowledge and skills (including operating experience required under paragraph (c) of this section) within 120 days after the satisfactory completion of:

[(1) Any part of the flight maneuvers and procedures portion of either an airline transport pilot certificate with type rating practical test or an additional type rating practical test, or

[(2) A § 121.441 proficiency check.

[(h) The following exceptions apply to the consolidation requirement of paragraph (g) of this section:

[(1) Pilots who have qualified and served as pilot in command or second in command on a particular type airplane in operations under this part before August 25, 1995, are not required to complete line operating flight time for consolidation of knowledge and skills.

[(2) Pilots who have completed the line operating flight time requirement for consolidation of knowledge and skills while serving as the certificate holder, the pilot may not serve as a pilot in the airplane for which the pilot has newly qualified unless the pilot satisfactorily completes refresher training as provided in the certificate holder's approved training program and that training is conducted by an appropriately qualified instructor or check pilot.

[(4) If the required 100 hours of line operating flight time are not completed within 120 days, the certificate holder may extend the 120-day period to no more than 150 days if—

[(i) The pilot continues to meet all other applicable requirements of subpart O of this part; and

[(ii) On or before the 120th day the pilot satisfactorily completes refresher training conducted by an appropriately qualified instructor or check pilot as provided in the certificate holder's approved training program, or a check pilot determines that the pilot has retained an adequate level of proficiency after observing that pilot in a supervised line operating flight.

[(5) The Administrator, upon application by the certificate holder, may authorize deviations from the requirements of paragraph (g) of this section, by an appropriate amendment to the operations specifications, to the extent warranted by any of the following circumstances:

[(i) A newly certificated certificate holder does not employ any pilots who meet the minimum requirements of paragraph (g) of this section.

[(ii) An existing certificate holder adds to its fleet an airplane type not before proven for use in its operations.

[(iii) A certificate holder establishes a new domicile to which it assigns pilots who will be required to become qualified on the airplanes operated from that domicile.]

[(i)] Notwithstanding the reductions in programmed hours permitted under §§ 121.405 and 121.409 of subpart N of this part, the hours of operating experience for flight crewmembers are not

§ 121.435 [Removed]

[(Amdt. 121–251, Eff. 1/19/96)]

§ 121.437 Pilot qualification: Certificates required.

(a) No pilot may act as pilot in command of an aircraft (or as second in command of an aircraft in a flag or supplemental operation that requires three or more pilots) unless he holds an airline transport pilot certificate and an appropriate type rating for that aircraft.

([b]) No certificate holder may use nor may any pilot act as a pilot in a capacity other than those specified in paragraph (a) of this section unless the pilot holds at least a commercial pilot certificate with appropriate category and class ratings for the aircraft concerned, and an instrument rating. [Notwithstanding the requirements of § 61.63(b) and (c) of this chapter, a pilot who is currently employed by a certificate holder and meets applicable training requirements of subpart N of this part, and the proficiency check requirements of § 121.441, may be issued the appropriate category and class ratings by presenting proof of compliance with those requirements to a Flight Standards District Office.]

(Amdt. 121–144, Eff. 6/26/78); (Amdt. 121–146, Eff. 6/22/78); (Amdt. 121–148, Eff. 12/4/78); (Amdt. 121–151, Eff. 4/23/79); (Amdt. 121–207, Eff. 10/25/89); (Amdt. 121–253, Eff. 2/26/96); [(Amdt. 121–262, Eff. 3/12/97)]

[§ 121.438 Pilot operating limitations and pairing requirements.

[(a) If the second in command has fewer than 100 hours of flight time as second in command in operations under this part in the type airplane being flown, and the pilot in command is not an appropriately qualified check pilot, the pilot in command must make all takeoffs and landings in the following situations:

[(1) At special airports designated by the Administrator or at special airports designated by the certificate holder; and

[(iv) The braking action on the runway to be used is reported to be less than "good".

[(v) The crosswind component for the runway to be used is in excess of 15 knots.

[(vi) Windshear is reported in the vicinity of the airport.

[(vii) Any other condition in which the PIC determines it to be prudent to exercise the PIC's prerogative.

[(b) No person may conduct operations under this part unless, for that type airplane, either the pilot in command or the second in command has at least 75 hours of line operating flight time, either as pilot in command or second in command. The Administrator may, upon application by the certificate holder, authorize deviations from the requirements of this paragraph (b) by an appropriate amendment to the operations specifications in any of the following circumstances:

[(1) A newly certificated certificate holder does not employ any pilots who meet the minimum requirements of this paragraph.

[(2) An existing certificate holder adds to its fleet a type airplane not before proven for use in its operations.

[(3) An existing certificate holder establishes a new domicile to which it assigns pilots who will be required to become qualified on the airplanes operated from that domicile.]

[(Amdt. 121–248, Eff. 8/25/95)]

§ 121.439 Pilot qualifications: Recent experience.

(a) No certificate holder may use any person nor may any person serve as a required pilot flight crewmember, unless within the preceding 90 days, that person has made at least three takeoffs and landings in the type airplane in which that person is to serve. The takeoffs and landings required by this paragraph may be performed in a visual simulator approved under § 121.407 to include takeoff and landing maneuvers. In addition, any person who fails to make the three required takeoffs and landings within any consecutive 90-day period must

make at least three takeoffs and landings in the type airplane in which that person is to serve or in an advanced simulator or visual simulator. When a visual simulator is used, the requirements of paragraph (c) of this section must be met.

(2) The takeoffs and landings required in paragraph (b)(1) of this section must include—

(i) At least one takeoff with a simulated failure of the most critical powerplant;

(ii) At least one landing from an ILS approach to the lowest ILS minimum authorized for the certificate holder; and

(iii) At least one landing to a full stop.

(c) A required pilot flight crewmember who performs the maneuvers prescribed in paragraph (b) of this section in a visual simulator must—

(1) Have previously logged 100 hours of flight time in the same type airplane in which he is to serve;

(2) Be observed on the first two landings made in operations under this part by an approved check airman who acts as pilot in command and occupies a pilot seat. The landings must be made in weather minimums that are not less than those contained in the certificate holder's operations specifications for Category I Operations, and must be made within 45 days following completion of simulator training.

(d) When using a simulator to accomplish any of the requirements of paragraph (a) or (b) of this section, each required flight crewmember position must be occupied by an appropriately qualified person and the simulator must be operated as if in a normal in-flight environment without use of the repositioning features of the simulator.

(e) A check airman who observes the takeoffs and landings prescribed in paragraphs (b)(1) and (c) of this section shall certify that the person being observed is proficient and qualified to perform flight duty in operations under this part and may require any additional maneuvers that are determined necessary to make this certifying statement.

(Amdt. 121–7, Eff. 8/16/65); (Amdt. 121–144, Eff. 6/26/78); (Amdt. 121–148, Eff. 12/4/78); (Amdt. 121–179, Eff. 10/1/82)

(b) A pilot-in-command line check for domestic and flag [operations] must—

(1) Be given by a pilot check airman who is currently qualified on both the route and the airplane; and

(2) Consist of at least one flight over a typical part of the [certificate holder's] route, or over a foreign or Federal airway, or over a direct route.

(c) A pilot-in-command line check for supplemental [operations] must—

(1) Be given by a pilot check airman who is currently qualified on the airplane; and

(2) Consist of at least one flight over a part of a Federal airway, foreign airway, or advisory route over which the pilot may be assigned.

(Amdt. 121–55, Eff. 2/2/70); (Amdt. 121–143, Eff. 6/26/78); [(Amdt. 121–253, Eff. 2/26/96)]

§ 121.441 Proficiency checks.

(a) No certificate holder may use any person nor may any person serve as a required pilot flight crewmember unless that person has satisfactorily completed either a proficiency check, or an approved simulator course of training under § 121.409, as follows—

(1) For a pilot in command, a proficiency check within the preceding 12 calendar months and, in addition, within the preceding 6 calendar months, either a proficiency check or the simulator training.

(2) [For all other pilots—

(i) Within the preceding 24 calendar months either a proficiency check or the line-oriented simulator training course under § 121.409; and

(ii) Within the preceding 12 calendar months, either a proficiency check or any simulator training course under § 121.409.]

(b) Except as provided in paragraph (c) and (d) of this section, a proficiency check must meet the following requirements—

(1) It must include at least the procedures and maneuvers set forth in appendix F to this part unless otherwise specifically provided in that appendix.

procedures for which a specific waiver authority is set forth in appendix F to this part if—

(1) The Administrator has not specifically required the particular maneuver or procedure to be performed;

(2) The pilot being checked is, at the time of the check, employed by a certificate holder as a pilot; and

(3) The pilot being checked is currently qualified for operations under this part in the particular type airplane and flight crewmember position or has, within the preceding six calendar months, satisfactorily completed an approved training program from the particular type airplane.

(e) If the pilot being checked fails any of the required maneuvers, the person giving the proficiency check may give additional training to the pilot during the course of the proficiency check. In addition to repeating the maneuvers failed, the person giving the proficiency check may require the pilot being checked to repeat any other maneuvers he finds are necessary to determine the pilot's proficiency. If the pilot being checked is unable to demonstrate satisfactory performance to the person conducting the check, the certificate holder may not use him nor may he serve in operations under this part until he has satisfactorily completed a proficiency check.

However, the entire proficiency check (other than the initial second-in-command proficiency check) required by this section may be conducted in an approved visual simulator if the pilot being checked accomplishes at least two landings in the appropriate airplane during a line check or other check conducted by a pilot check airman (a pilot-in-command may observe and certify the satisfactory accomplishment of these landings by a second-in-command). If a pilot proficiency check is conducted in accordance with this paragraph, the next required proficiency check for that pilot must be conducted in the same manner, or in accordance with appendix F of this part, or a course of training in an airplane

§ 121.442 [Deleted]

(Amdt. 121–7, Eff. 8/16/65); (Amdt. 121–249, Eff. 4/15/67); (Amdt. 121–55, Eff. 2/2/70)

§ 121.443 Pilot-in-command qualification: Routes and airports.

(a) Each certificate holder shall provide a system acceptable to the Administrator for disseminating the information required by paragraph (b) of this section to the pilot in command and appropriate flight operation personnel. The system must also provide an acceptable means for showing compliance with § 121.445.

(b) No certificate holder may use any person, nor may any person serve, as pilot in command unless the certificate holder has provided that person current information concerning the following subjects pertinent to the areas over which that person is to serve, and to each airport and terminal area into which that person is to operate, and ensures that that person has adequate knowledge of, and the ability to use, the information—

(1) Weather characteristics appropriate to the season.

(2) Navigation facilities.

(3) Communication procedures, including airport visual aids.

(4) Kinds of terrain and obstructions.

(5) Minimum safe flight levels.

(6) En route and terminal area arrival and departure procedures, holding procedures and authorized instrument approach procedures for the airports involved.

(7) Congested areas and physical layout of each airport in the terminal area in which the pilot will operate.

(8) Notices to Airmen.

Docket No. 17897 (45 FR 41594) Eff. 6/19/80

(Amdt. 121–7, Eff. 8/16/65); (Amdt. 121–159, Eff. 8/31/80)

or both, require a special type of navigation qualification.

(b) Except as provided in paragraph (c) of this section, no certificate holder may use any person, nor may any person serve, as pilot in command to or from an airport determined to require special airport qualifications unless, within the preceding 12 calendar months—

(1) The pilot in command or second in command has made an entry to that airport (including a takeoff and landing) while serving as a pilot flight crewmember; or

(2) The pilot in command has qualified by using pictorial means acceptable to the Administrator for that airport.

(c) Paragraph (b) of this section does not apply when an entry to that airport (including a takeoff or a landing) is being made if the ceiling at that airport is at least 1,000 feet above the lowest MEA or MOCA, or initial approach altitude prescribed for the instrument approach procedure for that airport, and the visibility at that airport is at least 3 miles.

(d) No certificate holder may use any person, nor may any person serve, as pilot in command between terminals over a route or area that requires a special type of navigation qualification unless, within the preceding 12 calendar months, that person has demonstrated qualification on the applicable navigation system in a manner acceptable to the Administrator, by one of the following methods—

(1) By flying over a route or area as pilot in command using the applicable special type of navigation system.

(2) By flying over a route or area as pilot in command under the supervision of a check airman using the special type of navigation system.

(3) By completing the training program requirements of appendix G of this part.

Docket No. 17897 (45 FR 41594) Eff. 6/19/80

(Amdt. 121–159, Eff. 8/31/80)

§ 121.447 [Reserved]

(Amdt. 121–159, Eff. 8/31/80)

months, he has had at least 50 hours of flight time as a flight engineer on that type airplane or the certificate holder or the Administrator has checked him on that type airplane and determined that he is familiar and competent with all essential current information and operating procedures.

(b) A flight check given in accordance with § 121.425(a)(2) satisfies the requirements of paragraph (a) of this section.

(Amdt. 121–55, Eff. 2/2/70)

§ 121.455 Use of prohibited drugs.

(a) This section applies to persons who perform a function listed in appendix I to this part for the certificate holder [or operator]. For the purpose of this section, a person who performs such a function pursuant to a contract with the certificate holder is considered to be performing that function for the certificate holder [or operator].

(b) No certificate holder [or operator] may knowingly use any person to perform, nor may any person perform for a certificate holder [or operator], either directly or by contract, any function listed in appendix I to this part while that person has a prohibited drug, as defined in that appendix, in his or her system.

(c) No certificate holder [or operator] shall knowingly use any person to perform, nor shall any person perform for a certificate holder [or operator], either directly or by contract, any safety-sensitive function if the person has a verified positive drug test result on or has refused to submit to a drug test required by appendix I to part 121 of this chapter and the person has not met the requirements of appendix I for returning to the performance of safety-sensitive duties.

Docket No. 25148 (53 FR 47057) Eff. 11/21/88

(Amdt. 121–200, Eff. 12/21/88); (Amdt. 121–240, Eff. 9/19/94); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.457 Testing for prohibited drugs.

(a) Each certificate holder [or operator] shall test each of its employees who performs a function listed in appendix I to this part in accordance with that appendix.

Eff. 1/19/96)]

[§ 121.458 Misuse of alcohol.

[(a) *General.* This section applies to employees who perform a function listed in appendix J to this part for a certificate holder (*covered employees*). For the purpose of this section, a person who meets the definition of covered employee in appendix J is considered to be performing the function for the certificate holder.

(b) *Alcohol concentration.* No covered employee shall report for duty or remain on duty requiring the performance of safety-sensitive functions while having an alcohol concentration of 0.04 or greater. No certificate holder having actual knowledge that an employee has an alcohol concentration of 0.04 or greater shall permit the employee to perform or continue to perform safety-sensitive functions.

(c) *On-duty use.* No covered employee shall use alcohol while performing safety-sensitive functions. No certificate holder having actual knowledge that a covered employee is using alcohol while performing safety-sensitive functions shall permit the employee to perform or continue to perform safety-sensitive functions.

(d) *Pre-duty use.*

(1) No covered employee shall perform flight crewmember or flight attendant duties within 8 hours after using alcohol. No certificate holder having actual knowledge that such an employee has used alcohol within 8 hours shall permit the employee to perform or continue to perform the specified duties.

(e) *Use following an accident.* No covered employee who has actual knowledge of an accident involving an aircraft for which he or she performed a safety-sensitive function at or near the time of the accident shall use alcohol for 8 hours following the accident, unless he or she has been given a post-accident test under appendix J of this part, or the employer has determined that the employee's performance could not have contributed to the accident.

(f) *Refusal to submit to a required alcohol test.* No covered employee shall refuse to submit to a post-accident, random, reasonable suspicion, or follow-up alcohol test required under appendix J to this part. No certificate holder shall permit an employee who refuses to submit to such a test to perform or continue to perform safety-sensitive functions.]

[(Amdt. 121–237, Eff. 3/17/94)]

[§ 121.459 Testing for alcohol.

[(a) Each certificate holder must establish an alcohol misuse prevention program in accordance with the provisions of appendix J to this part.

(b) No certificate holder shall use any person who meets the definition of *covered employee* in appendix J to this part to perform a safety-sensitive function listed in that appendix unless such person is subject to testing for alcohol misuse in accordance with the provisions of appendix J.]

[(Amdt. 121–237, Eff. 3/17/94)]

§ 121.531 Applicability.

This subpart prescribes requirements for flight operations applicable to all certificate holders, except where otherwise specified.

§ 121.533 Responsibility for operational control: Domestic [operations.]

(a) Each [certificate holder conducting domestic operations] is responsible for operational control.

(b) The pilot in command and the aircraft dispatcher are jointly responsible for the pre-flight planning, delay, and dispatch release of a flight in compliance with this chapter and operations specifications.

(c) The aircraft dispatcher is responsible for—

(1) Monitoring the progress of each flight;

(2) Issuing necessary information for the safety of the flight; and

(3) Canceling or redispatching a flight if, in his opinion or the opinion of the pilot in command, the flight cannot operate or continue to operate safely as planned or released.

(d) Each pilot in command of an aircraft is, during flight time, in command of the aircraft and crew and is responsible for the safety of the passengers, crewmembers, cargo, and airplane.

(e) Each pilot in command has full control and authority in the operation of the aircraft, without limitation, over other crewmembers and their duties during flight time, whether or not he holds valid certificates authorizing him to perform the duties of those crewmembers.

[(Amdt. 121–253, Eff. 2/26/96)]

§ 121.535 Responsibility for operational control: Flag [operations.]

(a) Each [certificate holder conducting flag operations] is responsible for operational control.

(b) The pilot in command and the aircraft dispatcher are jointly responsible for the pre-flight planning, delay, and dispatch release of a flight in compliance with this chapter and operations specifications.

(c) The aircraft dispatcher is responsible for—

(1) Monitoring the progress of each flight;

(2) Issuing necessary instructions and information for the safety of the flight; and

(3) Canceling or redispatching a flight if, in his opinion or the opinion of the pilot in command, the flight cannot operate or continue to operate safely as planned or released.

(d) Each pilot in command of an aircraft is, during flight time, in command of the aircraft and crew and is responsible for the safety of the passengers, crewmembers, cargo, and airplane.

(e) Each pilot in command has full control and authority in the operation of the aircraft, without limitation, over other crewmembers and their duties during flight time, whether or not he holds valid certificates authorizing him to perform the duties of those crewmembers.

(f) No pilot may operate an aircraft in a careless or reckless manner so as to endanger life or property.

[(Amdt. 121–253, Eff. 2/26/96)]

§ 121.537 Responsibility for operational control: [Supplemental operations.]

(a) Each [certificate holder conducting supplemental operations]—

(1) Is responsible for operational control; and

(2) Shall list each person authorized by it to exercise operational control in its operator's manual.

(b) The pilot in command and the director of operations are jointly responsible for the initiation, continuation, diversion, and termination of a flight in compliance with this chapter and the operations specifications. The director of operations may delegate the functions for the initiation, continuation, diversion, and termination of a flight but he may not delegate the responsibility for those functions.

(c) The director of operations is responsible for canceling, diverting, or delaying a flight if in his opinion or the opinion of the pilot in command the flight cannot operate or continue to operate safely as planned or released. The director of oper-

and intermediate stops.

(3) Any known conditions that may adversely affect the safety of flight.

(d) Each pilot in command of an aircraft is, during flight time, in command of the aircraft and crew and is responsible for the safety of the passengers, crewmembers, cargo, and aircraft. The pilot in command has full control and authority in the operation of the aircraft, without limitation, over other crewmembers and their duties during flight time, whether or not he holds valid certificates authorizing him to perform the duties of those crewmembers.

(e) Each pilot in command of an aircraft is responsible for the preflight planning and the operation of the flight in compliance with this chapter and the operations specifications.

(f) No pilot may operate an aircraft in a careless or reckless manner, so as to endanger life or property.

[(Amdt. 121–253, Eff. 2/26/96)]

§ 121.538 Airplane security.

Certificate holders conducting operations under this part shall comply with the applicable security requirements in part 108 of this chapter.

(Amdt. 121–83, Eff. 2/2/72); (Amdt. 121–85, Eff. 4/6/72); (Amdt. 121–86, Eff. 3/9/72); (Amdt. 121–90, Eff. 4/11/72); (Amdt. 121–117, Eff. 4/4/75); (Amdt. 121–118, Eff. 6/20/75); (Amdt. 121–127, Eff. 4/15/76); (Amdt. 121–128, Eff. 8/23/76); (Amdt. 121–130, Eff. 11/26/76); (Amdt. 121–131, Eff. 12/9/76); (Amdt. 121–141, Eff. 4/24/78); (Amdt. 121–145, Eff. 7/25/78); (Amdt. 121–153, Eff. 10/19/79); (Amdt. 121–167, Eff. 9/11/81)

§ 121.539 Operations notices.

Each certificate holder shall notify its appropriate operations personnel of each change in equipment and operating procedures, including each known change in the use of navigation aids, airports, air traffic control procedures and regulations, local airport traffic control rules, and known hazards to flight, including icing and other potentially hazard-

servicing of aircraft at intermediate stops, and shall consider the prevailing winds en route and the cruising speed of the type of aircraft used. This cruising speed may not be more than that resulting from the specified cruising output of the engines.

[(Amdt. 121–253, Eff. 2/26/96)]

§ 121.542 Flight crewmember duties.

(a) No certificate holder shall require, nor may any flight crewmember perform, any duties during a critical phase of flight except those duties required for the safe operation of the aircraft. Duties such as company required calls made for such nonsafety related purposes as ordering galley supplies and confirming passenger connections, announcements made to passengers promoting the air carrier or pointing out sights of interest, and filling out company payroll and related records are not required for the safe operation of the aircraft.

(b) No flight crewmember may engage in, nor may any pilot in command permit, any activity during a critical phase of flight which could distract any flight crewmember from the performance of his or her duties or which could interfere in any way with the proper conduct of those duties. Activities such as eating meals, engaging in nonessential conversations within the cockpit and nonessential communications between the cabin and cockpit crews, and reading publications not related to the proper conduct of the flight are not required for the safe operation of the aircraft.

(c) For the purposes of this section, critical phases of flight includes all ground operations involving taxi, takeoff and landing, and all other flight operations conducted below 10,000 feet, except cruise flight.

NOTE: Taxi is defined as ''movement of an airplane under its own power on the surface of an airport.''

(Amdt. 121–168, Eff. 5/18/81); (Amdt. 121–171, Eff. 6/18/81); (Amdt. 121–172, Eff. 7/18/81)

§ 121.543 Flight crewmembers at controls.

(a) Except as provided in paragraph (b) of this section, each required flight crewmember on flight

(2) If the crewmember's absence is in connection with physiological needs; or

(3) If the crewmember is taking a rest period, and relief is provided—

(i) In the case of the assigned pilot in command during the en route cruise portion of the flight, by a pilot who holds an airline transport pilot certificate and an appropriate type rating, is currently qualified as pilot in command or second in command, and is qualified as pilot in command of that aircraft during the en route cruise portion of the flight. A second in command qualified to act as a pilot in command en route need not have completed the following pilot in command requirements: The 6-month recurrent flight training required by § 121.433(c)(1)(iii); the operating experience required by § 121.434; the takeoffs and landings required by § 121.439; the line check required by § 121.440; and the 6-month proficiency check or simulator training required by § 121.441(a)(1); and

(ii) In the case of the assigned second in command, by a pilot qualified to act as second in command of that aircraft during en route operations. However, the relief pilot need not meet the recent experience requirements of § 121.439(b).

(Amdt. 121–12, Eff. 10/15/65); (Amdt. 121–144, Eff. 6/26/78); (Amdt. 121–179, Eff. 10/1/82)

§ 121.545 Manipulation of controls.

No pilot in command may allow any person to manipulate the controls of an aircraft during flight nor may any person manipulate the controls during flight unless that person is—

(a) A qualified pilot of the certificate holder operating that aircraft;

(b) An authorized pilot safety representative of the Administrator or of the National Transportation Safety Board who has the permission of the pilot in command, is qualified in the aircraft, and is checking flight operations; or

(c) A pilot of another certificate holder who has the permission of the pilot in command, is qualified

is—

(1) A crewmember;

(2) An FAA air carrier inspector, or an authorized representative of the National Transportation Safety Board, who is performing official duties;

(3) An employee of the United States, a certificate holder, or an aeronautical enterprise who has the permission of the pilot in command and whose duties are such that admission to the flight deck is necessary or advantageous for safe operations; or

(4) Any person who has the permission of the pilot in command and is specifically authorized by the certificate holder management and by the Administrator.

Subparagraph (2) of this paragraph does not limit the emergency authority of the pilot in command to exclude any person from the flight deck in the interests of safety.

(b) For the purposes of paragraph (a)(3) of this section, employees of the United States who deal responsibly with matters relating to safety and employees of the certificate holder whose efficiency would be increased by familiarity with flight conditions, may be admitted by the certificate holder. However, the certificate holder may not admit employees of traffic, sales, or other departments that are not directly related to flight operations, unless they are eligible under paragraph (a)(4) of this section.

(c) No person may admit any person to the flight deck unless there is a seat available for his use in the passenger compartment, except—

(1) An FAA air carrier inspector or an authorized representative of the Administrator or National Transportation Safety Board who is checking or observing flight operations;

(2) An air traffic controller who is authorized by the Administrator to observe ATC procedures;

(3) A certificated airman employed by the certificate holder whose duties require an airman certificate;

(4) A certificated airman employed by another certificate holder whose duties with that [certificate holder] require an airman certificate and who is authorized by the certificate holder

and he has been authorized in writing by a responsible supervisor, listed in the Operations Manual as having that authority; and

(6) A technical representative of the manufacturer of the aircraft or its components whose duties are directly related to the in-flight monitoring of aircraft equipment or operating procedures, if his presence on the flight deck is necessary to perform his duties, and he has been authorized in writing by the Administrator and by a responsible supervisor of the operations department of the certificate holder, listed in the Operations Manual as having that authority.

Docket No. 8084 (32 FR 5769) Eff. 4/1/67

[(Amdt. 121–253, Eff. 2/26/96)]

§ 121.548 Aviation safety inspector's credentials: Admission to pilot's compartment.

Whenever, in performing the duties of conducting an inspection, an inspector of the Federal Aviation Administration presents Form FAA 110A, "Aviation Safety Inspector's Credential," to the pilot in command of an aircraft operated by a [certificate holder,] the inspector must be given free and uninterrupted access to the pilot's compartment of that aircraft.

(Amdt. 121–143, Eff. 6/26/78); [(Amdt. 121–253, Eff. 2/26/96)]

§ 121.549 Flying equipment.

(a) The pilot in command shall ensure that appropriate aeronautical charts containing adequate information concerning navigation aids and instrument approach procedures are aboard the aircraft for each flight.

(b) Each crewmember shall, on each flight have readily available for his use a flashlight that is in good working order.

§ 121.550 Secret Service Agents: Admission to flight deck.

Whenever an Agent of the Secret Service who is assigned the duty of protecting a person aboard

Eff. 2/26/96)]

§ 121.551 Restriction or suspension of operation: Domestic and flag [operations.]

When a [certificate holder conducting domestic or flag operations] knows of conditions, including airport and runway conditions, that are a hazard to safe operations, it shall restrict or suspend operations until those conditions are corrected.

[(Amdt. 121–253, Eff. 2/26/96)]

§ 121.553 Restriction or suspension of operation: [Supplemental operations.]

When a [certificate holder conducting supplemental operations,] or pilot in command knows of conditions, including airport and runway conditions, that are a hazard to safe operations, the [certificate holder,] or pilot in command, as the case may be, shall restrict or suspend operations until those conditions are corrected.

[(Amdt. 121–253, Eff. 2/26/96)]

§ 121.555 Compliance with approved routes and limitations: Domestic and flag [operations.]

No pilot may operate an airplane in scheduled air transportation—

(a) Over any route or route segment unless it is specified in the [certificate holder's] operations specifications; or

(b) Other than in accordance with the limitations in the operations specifications.

[(Amdt. 121–253, Eff. 2/26/96)]

§ 121.557 Emergencies: Domestic and flag [operations.]

(a) In an emergency situation that requires immediate decision and action the pilot in command may take any action that he considers necessary under the circumstances. In such a case he may deviate from prescribed operations procedures and methods,

recorded. If the aircraft dispatcher cannot communicate with the pilot, he shall declare an emergency and take any action that he considers necessary under the circumstances.

(c) Whenever a pilot in command or dispatcher exercises emergency authority, he shall keep the appropriate ATC facility and dispatch centers fully informed of the progress of the flight. The person declaring the emergency shall send a written report of any deviation through the [certificate holder] operations manager, to the Administrator. A dispatcher shall send his report within 10 days after the date of the emergency, and a pilot in command shall send his report within 10 days after returning to his home base.

[(Amdt. 121–253, Eff. 2/26/96)]

§ 121.559 Emergencies: Supplemental [operations.]

(a) In an emergency situation that requires immediate decision and action, the pilot in command may take any action that he considers necessary under the circumstances. In such a case, he may deviate from prescribed operations, procedures and methods, weather minimums, and this chapter, to the extent required in the interests of safety.

(b) In an emergency situation arising during flight that requires immediate decision and action by appropriate management personnel in the case of operations conducted with a flight following service and which is known to them, those personnel shall advise the pilot in command of the emergency, shall ascertain the decision of the pilot in command, and shall have the decision recorded. If they cannot communicate with the pilot, they shall declare an emergency and take any action that they consider necessary under the circumstances.

(c) Whenever emergency authority is exercised, the pilot in command or the appropriate management personnel shall keep the appropriate ground radio station fully informed of the progress of the flight. The person declaring the emergency shall send a written report of any deviation, through the [certificate holder's] director of operations, to the Administrator within 10 days after the flight is com-

(a) Whenever he encounters a meteorological condition or an irregularity in a ground or navigational facility, in flight, the knowledge of which he considers essential to the safety of other flights, the pilot in command shall notify an appropriate ground station as soon as practicable.

(b) The ground radio station that is notified under paragraph (a) of this section shall report the information to the agency directly responsible for operating the facility.

§ 121.563 Reporting mechanical irregularities.

The pilot in command shall ensure that all mechanical irregularities occurring during flight time are entered in the maintenance log of the airplane at the end of that flight time. Before each flight the pilot in command shall ascertain the status of each irregularity entered in the log at the end of the preceding flight.

Docket No. 17897 (45 FR 41594) Eff. 7/19/80

(Amdt. 121–159, Eff. 8/31/80); (Amdt. 121–179, Eff. 10/1/82)

§ 121.565 Engine inoperative: Landing; reporting.

(a) Except as provided in paragraph (b) of this section, whenever an engine of an airplane fails or whenever the rotation of an engine is stopped to prevent possible damage, the pilot in command shall land the airplane at the nearest suitable airport, in point of time, at which a safe landing can be made.

(b) If not more than one engine of an airplane that has three or more engines fails or its rotation is stopped, the pilot in command may proceed to an airport that he selects if, after considering the following, he decides that proceeding to that airport is as safe as landing at the nearest suitable airport—

(1) The nature of the malfunction and the possible mechanical difficulties that may occur if flight is continued.

(2) The altitude, weight, and usable fuel at the time of engine stoppage.

keep that station fully informed of the progress of the flight.

(d) [If the pilot in command lands at an airport other than the nearest suitable airport, in point of time, he or she shall (upon completing the trip) send a written report, in duplicate, to his or her director of operations stating the reasons for determining that the selection of an airport, other than the nearest airport, was as safe a course of action as landing at the nearest suitable airport. The director of operations shall, within 10 days after the pilot returns to his or her home base, send a copy of this report with the director of operation's comments to the certificate-holding district office.]

(Amdt. 121–207, Eff. 10/25/89); [(Amdt. 121–253, Eff. 2/26/96)]

§ 121.567 Instrument approach procedures and IFR landing minimums.

No person may make an instrument approach at an airport except in accordance with IFR weather minimums and instrument approach procedures set forth in the certificate holder's operations specifications.

§ 121.569 Equipment interchange: Domestic and flag [operations.]

(a) Before operating under an interchange agreement, each [certificate holder conducting domestic or flag operations] shall show that—

(1) The procedures for the interchange operation conform with this chapter and with safe operating practices;

(2) Required crewmembers and dispatchers meet approved training requirements for the airplanes and equipment to be used and are familiar with the communications and dispatch procedures to be used;

(3) Maintenance personnel meet training requirements for the airplanes and equipment, and are familiar with the maintenance procedures to be used;

(4) Flight crewmembers and dispatchers meet appropriate route and airport qualifications; and

tially hazardous dissimilarities are safely overcome by flight crew familiarization.

(b) Each [certificate holder conducting domestic or flag operations] shall include the pertinent provisions and procedures involved in the equipment interchange agreement in its manuals.

[(Amdt. 121–253, Eff. 2/26/96)]

[§ 121.570 Airplane evacuation capability.

[(a) No person may cause an airplane carrying passengers to be moved on the surface, take off, or land unless each automatically deployable emergency evacuation assisting means, installed pursuant to § 121.310(a), is ready for evacuation.

[(b) Each certificate holder shall ensure that, at all times passengers are on board prior to airplane movement on the surface, at least one floor-level exit provides for the egress of passengers through normal or emergency means.]

[(Amdt. 121–230, Eff. 10/15/92)]

§ 121.571 Briefing passengers before takeoff.

(a) Each certificate holder operating a passenger-carrying airplane shall ensure that all passengers are orally briefed by the appropriate crewmember as follows—

(1) Before each takeoff, on each of the following—

(i) *Smoking.* Each passenger shall be briefed on when, where, and under what conditions smoking is prohibited (including, but not limited to, any applicable requirements of part 252 of this title). This briefing shall include a statement that the Federal Aviation Regulations require passenger compliance with the lighted passenger information signs, posted placards, areas designated for safety purposes as no smoking areas, and crewmember instructions with regard to these items. The briefing shall also include a statement that Federal law prohibits tampering with, disabling, or destroying any smoke detector in an airplane lavatory; smoking in lavatories; and, when applicable, smoking in passenger compartments.

senger information signs and crewmember instructions concerning the use of safety belts.

(iv) *The location and use of any required emergency flotation means.*

[(v) On operations that do not use a flight attendant, the following additional information:

(A) The placement of seat backs in an upright position before takeoff and landing.

(B) Location of survival equipment.

(C) If the flight involves operations above 12,000 MSL, the normal and emergency use of oxygen.

(D) Location and operation of fire extinguisher.]

(2) After each takeoff, immediately before or immediately after turning the seat belt sign off, an announcement shall be made that passengers should keep their seat belts fastened, while seated, even when the seat belt sign is off.

(3) [Except as provided in paragraph (a)(4) of this section, before each takeoff a required crewmember assigned to the flight shall conduct an individual briefing of each person who may need the assistance of another person to move expeditiously to an exit in the event of an emergency. In the briefing the required crewmember shall—]

(i) Brief the person and his attendant, if any, on the routes to each appropriate exit and on the most appropriate time to begin moving to an exit in the event of an emergency; and

(ii) Inquire of the person and his attendant, if any, as to the most appropriate manner of assisting the person so as to prevent pain and further injury.

(4) The requirements of paragraph (a)(3) of this section do not apply to a person who has been given a briefing before a previous leg of a flight in the same aircraft when the [crewmembers] on duty have been advised as to the most appropriate manner of assisting the person so as to prevent pain and further injury.

(b) Each certificate holder shall carry on each passenger-carrying airplane, in convenient locations

(c) The certificate holder shall describe in its manual the procedure to be followed in the briefing required by paragraph (a) of this section.

(Amdt. 121–2, Eff. 6/7/65); (Amdt. 121–30, Eff. 10/24/67); (Amdt. 121–84, Eff. 5/1/72); (Amdt. 121–133, Eff. 5/16/77); (Amdt. 121–144, Eff. 6/26/78); (Amdt. 121–146, Eff. 6/22/78); (Amdt. 121–196, Eff. 4/23/88); (Amdt. 121–230, Eff. 10/15/92); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.573 Briefing passengers: Extended overwater operations.

(a) In addition to the oral briefing required by § 121.571(a), each certificate holder operating an airplane in extended overwater operations shall ensure that all passengers are orally briefed by the appropriate crewmember on the location and operation of life preserver, liferafts, and other flotation means, including a demonstration of the method of donning and inflating a life preserver.

(b) The certificate holder shall describe in its manual the procedure to be followed in the briefing required by paragraph (a) of this section.

(c) If the airplane proceeds directly over water after takeoff, the briefing required by paragraph (a) of this section must be done before takeoff.

(d) If the airplane does not proceed directly over water after takeoff, no part of the briefing required by paragraph (a) of this section has to be given before takeoff but the entire briefing must be given before reaching the overwater part of the flight.

(Amdt. 121–2, Eff. 6/7/65); (Amdt. 121–144, Eff. 6/26/78); (Amdt. 121–146, Eff. 6/22/78)

§ 121.574 Oxygen for medical use by passengers.

(a) A certificate holder may allow a passenger to carry and operate equipment for the storage, generation, or dispensing of oxygen when the following conditions are met—

(1) The equipment is—

(i) Furnished by the certificate holder;

(ii) Of an approved type or is in conformity with the manufacturing, packaging, marking,

(v) Capable of providing a minimum mass flow of oxygen to the user of four liters per minute;

(vi) Constructed so that all valves, fittings, and gauges are protected from damage; and

(vii) Appropriately secured.

(2) When the oxygen is stored in the form of a liquid, the equipment has been under the certificate holder's approved maintenance program since its purchase new or since the storage container was last purged.

(3) When the oxygen is stored in the form of a compressed gas as defined in 49 CFR § 173.300(a)—

(i) The equipment has been under the certificate holder's approved maintenance program since its purchase new or since the last hydrostatic test of the storage cylinder; and

(ii) The pressure in any oxygen cylinder does not exceed the rated cylinder pressure.

(4) Each person using the equipment has a medical need to use it evidenced by a written statement to be kept in the person's possession signed by a licensed physician which specifies the maximum quantity of oxygen needed each hour and the maximum flow rate needed for the pressure altitude corresponding to the pressure in the cabin of the airplane under normal operating conditions. This subparagraph does not apply to the carriage of oxygen in an airplane in which the only passengers carried are persons who may have a medical need for oxygen during flight, no more than one relative or other interested person for each of those persons, and medical attendants.

(5) When a physician's statement is required by subparagraph (4) of this paragraph, the total quantity of oxygen carried is equal to the maximum quantity of oxygen needed each hour, as specified in the physician's statement, multiplied by the number of hours used to compute the amount of airplane fuel required by this part.

(6) The pilot in command is advised when the equipment is on board, and when it is intended to be used.

in accordance with paragraph (a) of this section.

(c) No certificate holder may allow any person to connect or disconnect oxygen dispensing equipment, to or from a gaseous oxygen cylinder while any passenger is aboard the airplane.

(d) The requirements of this section do not apply to the carriage of supplemental or first-aid oxygen and related equipment required by this chapter.

(Amdt. 121–113, Eff. 12/9/74); (Amdt. 121–159, Eff. 8/31/80)

§ 121.575 Alcoholic beverages.

(a) No person may drink any alcoholic beverage aboard an aircraft unless the certificate holder operating the aircraft has served that beverage to him.

(b) No certificate holder may serve any alcoholic beverage to any person aboard any of its aircraft who—

(1) Appears to be intoxicated;

(2) Is escorting a person or is being escorted in accordance with § 108.21; or

(3) Has a deadly or dangerous weapon accessible to him while abroad the aircraft in accordance with § 108.11.

(c) No certificate holder may allow any person to board any of its aircraft if that person appears to be intoxicated.

(d) Each certificate holder shall, within five days after the incident, report to the Administrator the refusal of any person to comply with paragraph (a) of this section, or of any disturbance caused by a person who appears to be intoxicated aboard any of its aircraft.

(Amdt. 121–118, Eff. 6/20/75); (Amdt. 121–178, Eff. 4/28/82)

§ 121.576 Retention of items of mass in passenger and crew compartments.

The certificate holder must provide and use means to prevent each item of galley equipment and each serving cart, when not in use, and each item of crew baggage, which is carried in a passenger or crew compartment from becoming a haz-

ing airplane movement on the surface, takeoff, and landing.

[(a) No certificate holder may move an airplane on the surface, take off, or land when any food, beverage, or tableware furnished by the certificate holder is located at any passenger seat.

[(b) No certificate holder may move an airplane on the surface, take off, or land unless each food and beverage tray and seat back tray table is secured in its stowed position.

[(c) No certificate holder may permit an airplane to move on the surface, take off, or land unless each passenger serving cart is secured in its stowed position.

[(d) No certificate holder may permit an airplane to move on the surface, take off, or land unless each movie screen that extends into an aisle is stowed.

[(e) Each passenger shall comply with instructions given by a crewmember with regard to compliance with this section.]

(Amdt. 121–84, Eff. 5/1/72); [(Amdt. 121–230, Eff. 10/15/92)]

§ 121.578 Cabin ozone concentration.

(a) For the purpose of this section, the following definitions apply—

(1) "Flight segment" means scheduled nonstop flight time between two airports.

(2) "Sea level equivalent" refers to conditions of 25 °C and 760 millimeters of mercury pressure.

(b) [Except as provided in paragraphs (d) and (e) of this section, no certificate holder may operate an airplane above the following flight levels unless it is successfully demonstrated to the Administrator that the concentration of ozone inside the cabin will not exceed—]

(1) For flight above flight level 320, 0.25 parts per million by volume, sea level equivalent, at any time above that flight level; and

(2) For flight above flight level 270, 0.1 parts per million by volume, sea level equivalent, time-weighted average for each flight segment that exceeds 4 hours and includes flight above that a statistical confidence of at least 84%, that at the altitudes and locations at which the airplane will be operated cabin ozone concentrations will not exceed the limits prescribed by paragraph (b) of this section.

(2) The airplane ventilation system, including any ozone control equipment, will maintain cabin ozone concentrations at or below the limits prescribed by paragraph (b) of this section.

(d) A certificate holder may obtain an authorization to deviate from the requirements of paragraph (b) of this section, by an amendment to its operations specifications if—

(1) It shows that due to circumstances beyond its control or to unreasonable economic burden it cannot comply for a specified period of time; and

(2) It has submitted a plan acceptable to the Administrator to effect compliance to the extent possible.

(e) A certificate holder need not comply with the requirements of paragraph (b) of this section for an aircraft—

(1) When the only persons carried are flight crewmembers and persons listed in § 121.583;

(2) If the aircraft is scheduled for retirement before January 1, 1985; or

(3) If the aircraft is scheduled for reengining under the provisions of subpart E of part 91, until it is reengined.

Docket No. 121–154 (45 FR 3883) Eff. 1/21/80 (Amdt. 121–162, Eff. 9/9/80); (Amdt. 121–181, Eff. 1/31/83); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.579 Minimum altitudes for use of autopilot.

(a) *En route operations.* Except as provided in paragraphs (b) and (c) of this section, no person may use an autopilot en route, including climb and descent, at an altitude above the terrain that is less than twice the maximum altitude loss specified in the Airplane Flight Manual for a malfunction of the automatic pilot under cruise conditions, or less than 500 feet, whichever is higher.

(1) When reported weather conditions are less than the basic VFR weather conditions in § 91.155 of this chapter, no person may use an automatic pilot with an approach coupler for ILS approaches at an altitude above the terrain that is less than 50 feet higher than § 121.583 the maximum altitude loss specified in the Airplane Flight Manual for the malfunction of the automatic pilot with approach coupler under approach conditions; and

(2) When reported weather conditions are equal to or better than the basic VFR minimums in § 91.155 of this chapter, no person may use an automatic pilot with an approach coupler for ILS approaches at an altitude above the terrain that is less than the maximum altitude loss specified in the Airplane Flight Manual for the malfunction of the autopilot with approach coupler under approach conditions, or 50 feet, whichever is higher.

(c) Notwithstanding paragraph (a) or (b) of this section, the Administrator issues operations specifications to allow the use, to touchdown, of an approved flight control guidance system with automatic capability, in any case in which—

(1) The system does not contain any altitude loss (above zero) specified in the Airplane Flight Manual for malfunction of the autopilot with approach coupler; and

(2) He finds that the use of the system to touchdown will not otherwise affect the safety standards required by this section.

(Amdt. 121–13, Eff. 11/30/65); (Amdt. 121–33, Eff. 11/18/67); (Amdt. 121–130, Eff. 11/26/76); (Amdt. 121–206, Eff. 8/18/90)

§ 121.581 [Observer's seat: En route inspections.]

(a) [Except as provided in paragraph (c) of this section, each certificate holder shall make available a seat on the flight deck of each airplane, used by it in air commerce, for occupancy by the Administrator while conducting en route inspections. The location and equipment of the seat, with respect to its suitability for use in conducting en

[(c) For any airplane type certificated before December 20, 1995, for not more than 30 passengers that does not have an observer seat on the flight deck, the certificate holder must provide a forward passenger seat with headset or speaker for occupancy by the Administrator while conducting en route inspections. Notwithstanding the requirements of § 121.587, the cockpit door, if required, may remain open during such inspections.]

(Amdt. 121–144, Eff. 6/26/78); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.583 Carriage of persons without compliance with the passenger-carrying requirements of this part.

(a) When authorized by the certificate holder, the following persons, but no others, may be carried aboard an airplane without complying with the passenger-carrying airplane requirements in §§ 121.309(f), 121.310, 121.391, 121.571, and 121.587; the passenger-carrying operation requirements in [§§ 121.157(c) and 121.291]; and the requirements pertaining to passengers in §§ 121.285, 121.313(f), 121.317, 121.547, and 121.573—

(1) A crewmember.

(2) A company employee.

(3) An FAA air carrier inspector, or an authorized representative of the National Transportation Safety Board, who is performing official duties.

(4) A person necessary for—

(i) The safety of the flight;

(ii) The safe handling of animals;

(iii) The safe handling of hazardous materials whose carriage is governed by regulations in 49 CFR part 175;

(iv) The security of valuable or confidential cargo;

(v) The preservation of fragile or perishable cargo;

(vi) Experiments on, or testing of, cargo containers or cargo handling devices;

(vii) The operation of special equipment for loading or unloading cargo; and

(7) A military courier, military route supervisor, military cargo contract coordinator, or a flight crewmember of another military cargo contract air carrier or commercial operator, carried by a military cargo contract air carrier or commercial operator in operations under a military cargo contract, if that carriage is specifically authorized by the appropriate armed forces.

(8) A dependent of an employee of the certificate holder when traveling with the employee on company business to or from outlying stations not served by adequate regular passenger flights.

(b) No certificate holder may operate an airplane carrying a person covered by paragraph (a) of this section unless—

(1) Each person has unobstructed access from his seat to the pilot compartment or to a regular or emergency exit;

(2) The pilot in command has a means of notifying each person when smoking is prohibited and when safety belts must be fastened; and

(3) The airplane has an approved seat with an approved safety belt for each person. The seat must be located so that the occupant is not in any position to interfere with the flight crewmembers performing their duties.

(c) Before each takeoff, each certificate holder operating an airplane carrying persons covered by paragraph (a) of this section shall ensure that all such persons have been orally briefed by the appropriate crewmember on—

(1) Smoking;

(2) The use of seat belts;

(3) The location and operation of emergency exits;

(4) The use of oxygen and emergency oxygen equipment; and

(5) For extended overwater operations, the location of liferafts, and the location and operation of life preservers including a demonstration of the method of donning and inflating a life preserver.

(d) Each certificate holder operating an airplane carrying persons covered by paragraph (a) of this section shall incorporate procedures for the safe

§ 121.584 [Removed]

(Amdt. 121–118, Eff. 6/20/75); (Amdt. 121–142, Eff. 4/24/78); (Amdt. 121–167, Eff. 9/11/81)

§ 121.585 Exit seating.

(a)(1) Each certificate holder shall determine, to the extent necessary to perform the applicable functions of paragraph (d) of this section, the suitability of each person it permits to occupy an exit seat, in accordance with this section. For the purpose of this section—

(i) "Exit seat" means—

(A) Each seat having direct access to an exit; and,

(B) Each seat in a row of seats through which passengers would have to pass to gain access to an exit, from the first seat inboard of the exit to the first aisle inboard of the exit.

(ii) A passenger seat having "direct access" means a seat from which a passenger can proceed directly to the exit without entering an aisle or passing around an obstruction.

(2) Each certificate holder shall make the passenger exit seating determinations required by this paragraph in a non-discriminatory manner consistent with the requirements of this section, by persons designated in the certificate holder's required operations manual.

(3) Each certificate holder shall designate the exit seats for each passenger seating configuration in its fleet in accordance with the definitions in this paragraph and submit those designations for approval as part of the procedures required to be submitted for approval under paragraphs (n) and (p) of this section.

(b) No certificate holder may seat a person in a seat affected by this section if the certificate holder determines that it is likely that the person would be unable to perform one or more of the applicable functions listed in paragraph (d) of this section because—

emergency exits;

(iv) To lift out, hold, deposit on nearby seats, or maneuver over the seatbacks to the next row objects the size and weight of over-wing window exit doors;

(v) To remove obstructions similar in size and weight to over-wing exit doors;

(vi) To reach the emergency exit expeditiously;

(vii) To maintain balance while removing obstructions;

(viii) To exit expeditiously;

(ix) To stabilize an escape slide after deployment; or

(x) To assist others in getting off an escape slide;

(2) The person is less than 15 years of age or lacks the capacity to perform one or more of the applicable functions listed in paragraph (d) of this section without the assistance of an adult companion, parent, or other relative;

(3) The person lacks the ability to read and understand instructions required by this section and related to emergency evacuation provided by the certificate holder in printed or graphic form or the ability to understand oral crew commands.

(4) The person lacks sufficient visual capacity to perform one or more of the applicable functions in paragraph (d) of this section without the assistance of visual aids beyond contact lenses or eyeglasses;

(5) The person lacks sufficient aural capacity to hear and understand instructions shouted by flight attendants, without assistance beyond a hearing aid;

(6) The person lacks the ability adequately to impart information orally to other passengers; or,

(7) The person has—

(i) A condition or responsibilities, such as caring for small children, that might prevent the person from performing one or more of the applicable functions listed in paragraph (d) of this section; or

(ii) A condition that might cause the person harm if he or she performs one or more of

in which briefings and oral commands are given by the crew, at each exit seat affected by this section, information that, in the event of an emergency in which a crewmember is not available to assist, a passenger occupying an exit row seat may use if called upon to perform the following functions—

(1) Locate the emergency exit;

(2) Recognize the emergency exit opening mechanism;

(3) Comprehend the instructions for operating the emergency exit;

(4) Operate the emergency exit;

(5) Assess whether opening the emergency exit will increase the hazards to which passengers may be exposed;

(6) Follow oral directions and hand signals given by a crewmember;

(7) Stow or secure the emergency exit door so that it will not impede use of the exit;

(8) Assess the condition of an escape slide, activate the slide, and stabilize the slide after deployment to assist others in getting off the slide;

(9) Pass expeditiously through the emergency exit; and

(10) Assess, select, and follow a safe path away from the emergency exit.

(e) Each certificate holder shall include on passenger information cards, at each exit seat—

(1) In the primary language in which emergency commands are given by the crew, the selection criteria set forth in paragraph (b) of this section, and a request that a passenger identify himself or herself to allow reseating if he or she—

(i) Cannot meet the selection criteria set forth in paragraph (b) of this section;

(ii) Has a nondiscernible condition that will prevent him or her from performing the applicable functions listed in paragraph (d) of this section;

(iii) May suffer bodily harm as the result of performing one or more of those functions; or

ation are provided by the certificate holder, or the ability to understand the specified language in which crew commands will be given in an emergency.

(f) Each certificate holder shall make available for inspection by the public at all passenger loading gates and ticket counters at each airport where it conducts passenger operations, written procedures established for making determinations in regard to exit row seating.

(g) No certificate holder may allow taxi or pushback unless at least one required crewmember has verified that no exit seat is occupied by a person the crewmember determines is likely to be unable to perform the applicable functions listed in paragraph (d) of this section.

(h) Each certificate holder shall include in its passenger briefings a reference to the passenger information cards, required by paragraphs (d) and (e), the selection criteria set forth in paragraph (b), and the functions to be performed, set forth in paragraph (d) of this section.

(i) Each certificate holder shall include in its passenger briefings a request that a passenger identify himself or herself to allow reseating if he or she—

(1) Cannot meet the selection criteria set forth in paragraph (b) of this section;

(2) Has a nondiscernible condition that will prevent him or her from performing the applicable functions listed in paragraph (d) of this section;

(3) May suffer bodily harm as the result of performing one or more of those functions listed in paragraph (d) of this section; or,

(4) Does not wish to perform those functions listed in paragraph (d) of this section.

A certificate holder shall not require the passenger to disclose his or her reason for needing reseating.

(j) [Reserved]

(k) In the event a certificate holder determines, in accordance with this section, that it is likely that a passenger assigned to an exit seat would be unable to assume the evacuation functions that may be required, to an exit seat.

(m) A certificate holder may deny transportation to any passenger under this section only because—

(1) The passenger refuses to comply with instructions given by a crewmember or other authorized employee of the certificate holder implementing exit seating restrictions established in accordance with this section, or

(2) The only seat that will physically accommodate the person's handicap is an exit seat.

(n) In order to comply with this section certificate holders shall—

(1) Establish procedures that address—

(i) The criteria listed in paragraph (b) of this section;

(ii) The functions listed in paragraph (d) of this section;

(iii) The requirements for airport information, passenger information cards, crewmember verification of appropriate seating in exit seats, passenger briefings, seat assignments, and denial of transportation as set forth in this section;

(iv) How to resolve disputes arising from implementation of this section, including identification of the certificate holder employee on the airport to whom complaints should be addressed for resolution; and

(2) Submit their procedures for preliminary review and approval to the principal operations inspectors assigned to them at the [certificate-holding district office.]

(o) Certificate holders shall assign seats prior to boarding consistent with the criteria listed in paragraph (b) and the functions listed in paragraph (d) of this section, to the maximum extent feasible.

(p) The procedures required by paragraph (n) of this section will not become effective until final approval is granted by the Director, Flight Standards Service, Washington, DC. Approval will be

§ 121.586 Authority to refuse transportation.

(a) No certificate holder may refuse transportation to a passenger on the basis that, because the passenger may need the assistance of another person to move expeditiously to an exit in the event of an emergency, his transportation would or might be inimical to safety of flight unless—

(1) The certificate holder has established procedures (including reasonable notice requirements) for the carriage of passengers who may need the assistance of another person to move expeditiously to an exit in the event of an emergency; and

(2) At least one of the following conditions exist—

(i) The passenger fails to comply with the notice requirements in the certificate holder's procedures.

(ii) The passenger cannot be carried in accordance with the certificate holder's procedures.

(b) Each certificate holder shall provide the [certificate-holding district office] with a copy of each procedure it establishes in accordance with paragraph (a)(2) of this section.

(c) Whenever the Administrator finds that revisions in the procedures described in paragraph (a)(2) of this section are necessary in the interest of safety or in the public interest, the certificate holder, after notification by the Administrator, shall make those revisions in its procedures. Within 30 days after the certificate holder receives such notice, it may file a petition to reconsider the notice with the [certificate-holding district office.] The filing of a petition to reconsider stays the notice pending a decision by the Administrator. However, if the Administrator finds that there is an emergency that requires immediate action in the interest of safety in air commerce, he may, upon a statement of the reasons, require a change effective without stay.

(d) Each certificate holder shall make available to the public at each airport it serves a copy of

§ 121.587 Closing and locking of flight crew compartment door.

(a) [Except as provided in paragraph (b) of this section, a pilot in command of an airplane that has a lockable flight crew compartment door in accordance with § 121.313 and that is carrying passengers shall ensure that the door separating the flight crew compartment from the passenger compartment is closed and locked during flight.]

(b) The provisions of paragraph (a) of this section do not apply—

(1) During takeoff and landing if the crew compartment door is the means of access to a required passenger emergency exit or a floor level exit; or

(2) At any time that it is necessary to provide access to the flight crew or passenger compartment, to a crewmember in the performance of his duties or for a person authorized admission to the flight crew compartment under § 121.547.

[(3) When a jumpseat is being used by persons authorized under § 121.547 in airplanes in which closing and locking the flight crew compartment door is impossible while the jumpseat is in use.]

(Amdt. 121–14, Eff. 12/18/65); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.589 Carry-on baggage.

(a) No certificate holder may allow the boarding of carry-on baggage on an airplane unless each passenger's baggage has been scanned to control the size and amount carried on board in accordance with an approved carry-on baggage program in its operations specifications. In addition, no passenger may board an airplane if his/her carry-on baggage exceeds the baggage allowance prescribed in the carry-on baggage program in the certificate holder's operations specifications.

(b) No certificate holder may allow all passenger entry doors of an airplane to be closed in preparation for taxi or pushback unless at least one required crewmember has verified that each article of baggage is stowed in accordance with this section and § 121.285(c) [and (d)].

(2) As provided in § 121.285(c) [and (d)]; or

(3) Under a passenger seat.

(d) Baggage, other than articles of loose clothing, may not be placed in an overhead rack unless that rack is equipped with approved restraining devices or doors.

(e) Each passenger must comply with instructions given by crewmembers regarding compliance with paragraphs (a), (b), (c), (d), and (g) of this section.

(f) Each passenger seat under which baggage is allowed to be stowed shall be fitted with a means to prevent articles of baggage stowed under it from sliding forward. In addition, each aisle seat shall be fitted with a means to prevent articles of baggage stowed under it from sliding sideward into the aisle under crash impacts severe enough to induce the ultimate inertia forces specified in the emergency landing condition regulations under which the airplane was type certificated.

(g) In addition to the methods of stowage in paragraph (c) of this section, flexible travel canes carried by blind individuals may be stowed—

(1) Under any series of connected passenger seats in the same row, if the cane does not protrude into an aisle and if the cane is flat on the floor; or

(2) Between a nonemergency exit window seat and the fuselage, if the cane is flat on the floor; or

(3) Beneath any two nonemergency exit window seats, if the cane is flat on the floor; or

(4) In accordance with any other method approved by the Administrator.

Docket No. 24996 (52 FR 21476) Eff. 6/5/87

(Amdt. 121–30, Eff. 10/24/67); (Amdt. 121–46, Eff. 4/23/69); (Amdt. 121–84, Eff. 5/1/72); (Amdt. 121–159, Eff. 8/31/80); (Amdt. 121–174, Eff. 11/20/81); (Amdt. 121–194, Eff. 7/6/87); [(Amdt. 121–251, Eff. 1/19/96)]

of the United States, unless that airport is certificated under part 139 of this chapter. However, an air carrier may designate and use as a required alternate airport for departure or destination an airport that is not certificated under part 139 of this chapter.

(b) Certificate holders conducting passenger-carrying operations with airplanes designed for less than 31 passenger seats may operate those airplanes into airports not certificated under part 139 of this chapter if the following conditions are met:

(1) The airport is adequate for the proposed operation, considering such items as size, surface, obstructions, and lighting.

(2) For an airplane carrying passengers at night, the pilot may not take off from, or land at, an airport unless—

(i) The pilot has determined the wind direction from an illuminated wind direction indicator or local ground communications or, in the case of takeoff, that pilot's personal observations; and

(ii) The limits of the area to be used for landing or takeoff are clearly shown by boundary or runway marker lights. If the area to be used for takeoff or landing is marked by flare pots or lanterns, their use must be approved by the Administrator.

Docket No. 20450 (49 FR 18089) Eff. 4/27/84

(Amdt. 121–102, Eff. 5/21/73); (Amdt. 121–110, Eff. 9/14/74); (Amdt. 121–182, Eff. 5/29/84); (Amdt. 121–251, Eff. 1/19/96); [(Amdt. 121–262, Eff. 3/12/97)]

§ 121.681 Applicability.

This subpart prescribes requirements for the preparation and maintenance of records and reports for all certificate holders.

§ 121.683 Crewmember and dispatcher record.

(a) Each certificate holder shall—

(1) Maintain current records of each crewmember and each aircraft dispatcher (domestic and flag [operations] only) that show whether the crewmember or aircraft dispatcher complies with the applicable sections of this chapter, including, but not limited to, proficiency and route checks, airplane and route qualifications, training, any required physical examinations, flight, duty, and rest time records; and

(2) Record each action taken concerning the release from employment or physical or professional disqualification of any flight crewmember or aircraft dispatcher (domestic and flag [operations] only) and keep the record for at least six months thereafter.

(b) [Each certificate holder conducting supplemental operations shall maintain the records required by paragraph (a) of this section at its principal base of operations, or at another location used by it and approved by the Administrator.]

(c) Computer record systems approved by the Administrator may be used in complying with the requirements of paragraph (a) of this section.

(Amdt. 121–144, Eff. 6/26/78); (Amdt. 121–241, Eff. 11/18/94); [(Amdt. 121–253, Eff. 2/26/96)]

§ 121.685 Aircraft record: Flag and domestic [operations.]

[Each certificate holder conducting domestic or flag operations shall maintain a current list of each aircraft that it operates in scheduled air transportation and shall send a copy of the record and each change to the certificate-holding district office. Airplanes of another certificate holder operated under an interchange agreement may be incorporated by reference.]

(Amdt. 121–207, Eff. 10/25/89); [(Amdt. 121–253, Eff. 2/26/96)]

§ 121.687 Dispatch release: Flag and domestic [operations.]

(a) The dispatch release may be in any form but must contain at least the following information concerning each flight—

(1) Identification number of the aircraft.

(2) Trip number.

(3) Departure airport, intermediate stops, destination airports, and alternate airports.

(4) A statement of the type of operation (*e.g.*, IFR, VFR).

(5) Minimum fuel supply.

(b) The dispatch release must contain, or have attached to it, weather reports, available weather forecasts, or a combination thereof, for the destination airport, intermediate stops, and alternate airports, that are the latest available at the time the release is signed by the pilot in command and dispatcher. It may include any additional available weather reports or forecasts that the pilot in command or the aircraft dispatcher considers necessary or desirable.

[(Amdt. 121–253, Eff. 2/26/96)]

§ 121.689 Flight release form: Supplemental [operations.]

(a) Except as provided in paragraph (c) of this section, the flight release may be in any form but must contain at least the following information concerning each flight—

(1) Company or organization name.

(2) Make, model, and registration number of the aircraft being used.

(3) Flight or trip number, and date of flight.

(4) Name of each flight crewmember, flight attendant, and pilot designated as pilot in command.

(5) Departure airport, destination airports, alternate airports, and route.

the latest available at the time the release is signed. It may include any additional available weather reports or forecasts that the pilot in command considers necessary or desirable.

(c) Each [certificate holder conducting domestic or flag operations] under the rules of this part applicable to supplemental [operations] shall comply with the dispatch or flight release forms required for scheduled operations under this subpart.

[(Amdt. 121–253, Eff. 2/26/96)]

121.691 [Reserved]

(Amdt. 121–159, Eff. 8/31/80)

§ 121.693 Load manifest: [All certificate holders.]

The load manifest must contain the following information concerning the loading of the airplane at takeoff time—

(a) The weight of the aircraft, fuel and oil, cargo, and baggage, passengers, and crewmembers.

(b) The maximum allowable weight for that flight that must not exceed the least of the following weights—

(1) Maximum allowable takeoff weight for the runway intended to be used (including corrections for altitude and gradient, and wind and temperature conditions existing at the takeoff time).

(2) Maximum takeoff weight considering anticipated fuel and oil consumption that allows compliance with applicable en route performance limitations.

(3) Maximum takeoff weight considering anticipated fuel and oil consumption that allows compliance with the maximum authorized design landing weight limitations on arrival at the destination airport.

(4) Maximum takeoff weight considering anticipated fuel and oil consumption that allows compliance with landing distance limitations or arrival at the destination and alternate airports.

(c) The total weight computed under approved procedures.

§ 121.695 Disposition of load manifest, dispatch release, and flight plans: Domestic and flag [operations.]

(a) The pilot in command of an airplane shall carry in the airplane to its destination—

(1) A copy of the completed load manifest (or information from it, except information concerning cargo and passenger distribution);

(2) A copy of the dispatch release; and

(3) A copy of the flight plan.

(b) The [certificate holder] shall keep copies of the records required in this section for at least three months.

(Amdt. 121–178, Eff. 4/28/82); [(Amdt. 121–253, Eff. 2/26/96)]

§ 121.697 Disposition of load manifest, flight release, and flight plans: Supplemental [operations.]

(a) The pilot in command of an airplane shall carry in the airplane to its destination the original or a signed copy of the—

(1) Load manifest;

(2) Flight release;

(3) Airworthiness release;

(4) Pilot route certification; and

(5) Flight plan.

(b) [If a flight originates at the certificate holder's principal base of operations, it shall retain at that base a signed copy of each document listed in paragraph (a) of this section.

(c) [Except as provided in paragraph (d) of this section, if a flight originates at a place other than the certificate holder's principal base of operations, the pilot in command (or another person not aboard the airplane who is authorized by the certificate holder) shall, before or immediately after departure of the flight, mail signed copies of the documents listed in paragraph (a) of this section, to the principal base of operations.

(d) [If a flight originates at a place other than the certificate holder's principal base of operations, and there is at that place a person to manage the

to the principal base of operations, if the originals or other copies of them have been previously returned to the principal base of operations.

(e) [The certificate holder conducting supplemental operations shall:

(1) Identify in its operations manual the person having custody of the copies of documents retained in accordance with paragraph (d) of this section; and

(2) Retain at its principal base of operations either an original or a copy of the records required by this section for at least three months.]

(Amdt. 121–123, Eff. 10/29/75); (Amdt. 121–143, Eff. 6/26/78); (Amdt. 121–178, Eff. 4/28/82); [(Amdt. 121–253, Eff. 2/26/96)]

§ 121.698 [Reserved]

(Amdt. 121–51, Eff. 10/16/69); (Amdt. 121–94, Eff. 9/8/72)

§ 121.699 [Reserved]

(Amdt. 121–51, Eff. 10/16/69); (Amdt. 121–94, Eff. 9/8/72)

§ 121.701 Maintenance log: Aircraft.

(a) Each person who takes action in the case of a reported or observed failure or malfunction of an airframe, engine, propeller, or appliance that is critical to the safety of flight shall make, or have made, a record of that action in the airplane's maintenance log.

(b) Each certificate holder shall have an approved procedure for keeping adequate copies of the record required in paragraph (a) of this section in the airplane in a place readily accessible to each flight crewmember and shall put that procedure in the certificate holder's manual.

§ 121.703 Mechanical reliability reports.

(a) Each certificate holder shall report the occurrence or detection of each failure, malfunction, or defect concerning—

(5) An aircraft component that causes accumulation or circulation of smoke, vapor, or toxic or noxious fumes in the crew compartment or passenger cabin during flight;

(6) Engine shutdown during flight because of flameout;

(7) Engine shutdown during flight when external damage to the engine or airplane structure occurs;

(8) Engine shutdown during flight due to foreign object ingestion or icing;

(9) Engine shutdown during flight of more than one engine;

(10) A propeller feathering system or ability of the system to control overspeed during flight;

(11) A fuel or fuel-dumping system that affects fuel flow or causes hazardous leakage during flight;

(12) [An unwanted landing gear extension or retraction, or an unwanted opening or closing of landing gear doors during flight;]

(13) Brake system components that result in loss of brake actuating force when the airplane is in motion on the ground;

(14) Aircraft structure that requires major repair;

(15) Cracks, permanent deformation, or corrosion of aircraft structures, if more than the maximum acceptable to the manufacturer or the FAA;

(16) Aircraft components or systems that result in taking emergency actions during flight (except action to shut down an engine); and

(17) Emergency evacuation systems or components including all exit doors, passenger emergency evacuation lighting systems, or evacuation equipment that are found defective, or that fail to perform the intended functions during an actual emergency or during training, testing, maintenance, demonstrations, or inadvertent deployments.

(b) For the purpose of this section "during flight" means the period from the moment the aircraft leaves the surface of the earth on takeoff until it touches down on landing.

(c) In addition to the reports required by paragraph (a) of this section, each certificate holder

each day and ending at 0900 local time on the next day, to the [certificate-holding district office]. Each report of occurrences during a 24-hour period must be mailed or delivered to that office within the next 72 hours. However, a report that is due on a Saturday or Sunday may be mailed or delivered on the following Monday, and one that is due on a holiday may be mailed or delivered on the next work day.

(e) The certificate holder shall transmit the reports required by this section in a manner and on a form that is convenient to its system of communication and procedure, and shall include in the first daily report as much of the following as is available—

(1) Type and identification number of the aircraft.

(2) The name of the operator.

(3) The date, flight number, and stage during which the incident occurred (*e.g.*, preflight, takeoff, climb, cruise, descent, landing, and inspection).

(4) The emergency procedure effected (*e.g.*, unscheduled landing and emergency descent).

(5) The nature of the failure, malfunction, or defect.

(6) Identification of the part and system involved, including available information pertaining to type designation of the major component and time since overhaul.

(7) Apparent cause of the failure, malfunction, or defect (*e.g.*, wear, crack, design deficiency, or personnel error).

(8) Whether the part was repaired, replaced sent to the manufacturer, or other action taken.

(9) Whether the aircraft was grounded.

(10) Other pertinent information necessary for more complete identification, determination of seriousness, or corrective action.

(f) [A certificate holder that is also the holder of a Type Certificate (including a Supplemental Type Certificate), a Parts Manufacturer Approval, or a Technical Standard Order Authorization, or that is the licensee of a type certificate holder, need not report a failure, malfunction, or defect under this section if the failure, malfunction, or

facturer or other agency, concerning a report required by this section, it shall expeditiously submit it as a supplement to the first report and reference the date and place of submission of the first report.

(Amdt. 121–58, Eff. 4/2/70); (Amdt. 121–59, Eff. 3/24/70); (Amdt. 121–63, Eff. 6/26/70); (Amdt. 121–68, Eff. 9/28/70); (Amdt. 121–72, Eff. 11/30/70); (Amdt. 121–143, Eff. 6/26/78); (Amdt. 121–178, Eff. 4/28/82); (Amdt. 121–187, Eff. 9/9/85); (Amdt. 121–195, Eff. 4/15/88); [(Amdt. 121–251, Eff. 1/19/96)]

§ 121.705 Mechanical interruption summary report.

Each certificate holder shall regularly and promptly send a summary report on the following occurrences to the Administrator—

(a) Each interruption to a flight, unscheduled change of aircraft en route, or unscheduled stop or diversion from a route, caused by known or suspected mechanical difficulties or malfunctions that are not required to be reported under § 121.703.

(b) The number of engines removed prematurely because of malfunction, failure or defect, listed by make and model and the aircraft type in which it was installed.

(c) The number of propeller featherings in flight, listed by type of propeller and engine and airplane on which it was installed. Propeller featherings for training, demonstration, or flight check purposes need not be reported.

(Amdt. 121–10, Eff. 8/16/65)

§ 121.707 Alteration and repair reports.

(a) Each certificate holder shall, promptly upon its completion, prepare a report of each major alteration or major repair of an airframe, aircraft engine, propeller, or appliance of an aircraft operated by it.

(b) The certificate holder shall submit a copy of each report of a major alteration to, and shall keep a copy of each report of a major repair available for inspection by, the representative of the Administrator who is assigned to it.

prepares or causes to be prepared—

(1) An airworthiness release; or

(2) An appropriate entry in the aircraft log.

(b) The airworthiness release or log entry required by paragraph (a) of this section must—

(1) Be prepared in accordance with the procedures set forth in the certificate holder's manual;

(2) Include a certification that—

(i) The work was performed in accordance with the requirements of the certificate holder's manual;

(ii) All items required to be inspected were inspected by an authorized person who determined that the work was satisfactorily completed;

(iii) No known condition exists that would make the airplane unairworthy; and

(iv) So far as the work performed is concerned, the aircraft is in condition for safe operation; and

(3) Be signed by an authorized certificated mechanic or repairman except that a certificated repairman may sign the release or entry only for the work for which he is employed and certificated.

Notwithstanding subparagraph (3) of this paragraph, after maintenance, preventive maintenance, or alterations performed by a repair station certificated under the provisions of subpart C of part 145, the airworthiness release or log entry required by paragraph (a) of this section may be signed by a person authorized by that repair station.

(c) When an airworthiness release form is prepared the certificate holder must give a copy to the pilot in command and must keep a record thereof for at least two months.

(d) Instead of restating each of the conditions of the certification required by paragraph (b) of this section, the certificate holder may state in its manual that the signature of an authorized certificated mechanic or repairman constitutes that certification.

(Amdt. 121–6, Eff. 5/9/65); (Amdt. 121–21, Eff. 9/8/66)

§ 121.713 Retention of contracts and amendments: Commercial operators who conduct intrastate operations for compensation or hire.

(a) Each commercial operator who conducts intrastate operations for compensation or hire shall keep a copy of each written contract under which it provides services as a commercial operator for a period of at least 1 year after the date of execution of the contract. In the case of an oral contract, it shall keep a memorandum stating its elements, and of any amendments to it, for a period of at least one year after the execution of that contract or change.

(b) Each commercial operator who conducts intrastate operations for compensation or hire shall submit a financial report for the first 6 months of each fiscal year and another financial report for each complete fiscal year. If that person's operating certificate is suspended for more than 29 days, that person shall submit a financial report as of the last day of the month in which the suspension is terminated. The report required to be submitted by this section shall be submitted within 60 days of the last day of the period covered by the report and must include—

(1) A balance sheet that shows assets, liabilities, and net worth on the last day of the reporting period;

(2) [The information required by § 119.35(e)(2), (e)(7), and (e)(8) of this chapter;]

(3) An itemization of claims in litigation against the applicant, if any, as of the last day of the period covered by the report;

(4) A profit and loss statement with the separation of items relating to the applicant's commercial operator activities from his other business activities, if any; and

(5) A list of each contract that gave rise to operating income on the profit and loss statement, including the names and addresses of the

SUMMARY: This rule requires certain commuter operators that now conduct operations under part 135 to conduct those operations under part 121. The commuter operators affected are those conducting scheduled passenger-carrying operations in airplanes that have passenger-seating configurations of 10 to 30 seats (excluding any crewmember seat) and those conducting scheduled passenger-carrying operations in turbojet airplanes regardless of seating configuration. The rule revises the requirements concerning operating certificates and operations specifications for all part 121, 125, and 135 certificate holders. The rule also requires certain management officials for all certificate holders under parts 121 and 135. The rule is intended to increase safety in scheduled passenger-carrying operations and to clarify, update, and consolidate the certification and operations requirements for persons who transport passengers or property by air for compensation or hire.

NOTE: Please refer to preamble pages P–1113 through P–1228 for entire preamble.

Special Federal Aviation Regulation 50–2

Special Flight Rules in the Vicinity of Grand Canyon National Park

Adopted: December 24, 1996 **Effective: May 1, 1997**

(Published in 61 FR 69302, December 31, 1996)

(Corrected in 62 FR 2445, January 16, 1997)

SUMMARY: This final rule is one part of an overall strategy to further reduce the impact of aircraft noise on the park environment and to assist the National Park Service in achieving its statutory mandate, imposed by Public Law 100–91, to provide for the substantial restoration of natural quiet and experience in Grand Canyon National Park. This action is issued concurrently with: a Notice of Proposed Rulemaking regarding Noise Limitations for Aircraft Operations in the Vicinity of Grand Canyon National Park; a Notice of Availability of Proposed Commercial Air Tour Routes for Grand Canyon National Park and Request for Comments; and the Environmental Assessment issued with this final rule. This action amends part 93 of the Federal Aviation Regulations by adding a new subpart to codify the provisions of Special Federal Aviation Regulation No. 50–2, Special Flight Rules in the Vicinity of Grand Canyon National Park; modifies the dimensions of the Grand Canyon National Park Special Flight Rules Area; establishes new and modifies existing flight-free zones; establishes new and modifies existing flight corridors; and establishes reporting requirements for commercial sightseeing companies operating in the Special Flight Rules Area. In addition, to provide further protection for park resources, this final rule prohibits commercial sightseeing operations in the Zuni and Dragon corridors during certain time periods, and limits the number of aircraft that can be used for commercial sightseeing operations in the Grand Canyon National Park Special Flight Rules Area.

NOTE: Please refer to preamble pages P–247 through P–287 in part 93 for entire preamble.

(This regulation inadvertently removed SFAR 50–2)

SUMMARY: On December 31, 1996, the FAA published a final rule that codifies the provisions of Special Federal Aviation Regulation (SFAR) No. 50–2, Special Flight Rules in the Vicinity of Grand Canyon National Park (GCNP); modifies the dimensions of the GCNP Special Flight Rules Area; establishes new and modifies existing flight-free zones; establishes new and modifies existing flight corridors; establishes reporting requirements for commercial sightseeing companies operating in the Special Flight Rules Area; prohibits commercial sightseeing operations during certain time periods; and limits the number of aircraft that can be used for commercial sightseeing operations in the GCNP Special Flight Rules Area. This action delays the effective date for 14 CFR §§ 93.301, 93.305, and 93.307 of the final rule and reinstates portions of and amends the expiration date of SFAR No. 50–2. This action does not affect or delay the implementation of the curfew, aircraft restrictions, reporting requirements or the other portions of the rule.

DATES: The effective date of May 1, 1997, for 14 CFR §§ 93.301, 93.305, and 93.307, is delayed until 0901 UTC January 31, 1998. SFAR No. 50–2 is reinstated and amended effective 0901 UTC May 1, 1997. SFAR No. 50–2, Sections 2, 3, 6, 7 and 8 are removed effective 0901 UTC May 1, 1997.

Comments must be received on or before March 24, 1997.

ADDRESSES: Comments should be mailed, in triplicate to: Federal Aviation Administration, Office of the Chief Counsel, Attention: Rules Docket (AGC–200), Docket No. 28537, 800 Independence Avenue, SW., Washington, DC 20591. Comments may be sent electronically to the Rules Docket by using the following Internet address nprmcmts@mail.faa.dot.gov. Comments must be marked Docket No. 28537. Comments may be examined in the Rules Docket in Room 915G on weekdays between 8:30 a.m. and 5:00 p.m., except on Federal holidays.

FOR FURTHER INFORMATION CONTACT: Mr. Neil Saunders, Airspace and Rules Division (ATA–400), Office of Air Traffic Airspace Management, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone (202) 267–8783.

SUPPLEMENTARY INFORMATION:

Request for Comments on the Rule

Although this action is a final rule, and was not preceded by notice and public procedure, comments are invited on the rule. This rule will become effective on the date specified in the "DATES" section. Comments that provide the factual basis supporting the views and suggestions presented are particularly helpful in evaluating the effects of the rule, and in determining whether additional rulemaking is required.

History

On December 31, 1996, the FAA published three concurrent actions (a final rule, a Notice of Proposed Rulemaking (NPRM), and a Notice of Availability of Proposed Commercial Air Tour Routes) in the *Federal Register* (62 FR 69301) as part of an overall strategy to reduce further the impact of aircraft noise on the park environment and to assist the National Park Service (NPS) in achieving its statutory mandate imposed by Public Law 100–91. The final rule amends part 93 of the Federal Aviation Regulations and adds a new subpart to codify the provisions of SFAR No. 50–2; modifies the dimensions of the GCNP Special Flight Rules

operating in the vicinity of GCNP was also published with a comment period that closes on March 31, 1997.

Finally, a Notice of Availability of Proposed Commercial Air Tour Routes for the GCNP was published with a 30-day comment period that closed on January 31, 1997. This Notice requested comment on the proposed new or modified existing air tour routes, which complement the final rule affecting the Special Flight Rules in the Vicinity of GCNP.

Petitions

By petition dated January 15, 1997, the Aircraft Owners and Pilots Association requested that the FAA reconsider the rule because of its perceived negative impact on the general aviation community and the fact that general aviation traffic does not contribute to the issues addressed by the final rule.

On January 30, 1997, the Clark County Department of Aviation, et al., filed a petition seeking reconsideration and/or a stay of effectiveness of the implementation of the Toroweap/ Shinumo Flight-Free Zone that will bar the use of the current ''Blue 1'' commercial air tour route until the FAA has taken adequate steps to assure the availability of an adequate alternative for Las Vegas based air tour operators.

On January 31, 1997, the Grand Canyon Air Tour Coalition (Coalition) requested a stay of the effective date arguing that the necessary pilot training and certification could not be reasonably and safely completed prior to the May 1, 1997, effective date. The petition also alleged that discontinuing and limiting existing tour routes as of May 1, 1997, would disrupt the travel plans of a substantial portion of GCNP visitors, and air tour operators would be forced to dishonor contractual obligations based on material printed prior to August 1996. (This administrative action is separate from but interrelated to a Petition for Review filed by the Coalition in the Court of Appeals for the District of Columbia Circuit, *Grand Canyon Air Tour Coalition* v. *FAA,* (Case No. 97–1003)).

On February 18, 1997, the Grand Canyon Trust, et. al., (Trust) filed a request with the FAA opposing the Coalition's request for stay of the final rule and urged the FAA to deny the Coalition's request. The Trust argued that the Coalition has not presented valid grounds to support its stay request.

Even though the specific Petitions filed with the FAA focus on different aspects of the operating environment within the Park, the underlying concepts of the three Petitions are similar in nature. All three administrative Petitions are concerned with the air tour route structure or its implementation.

In support of the requests for a stay of the effective date, the Petitions have alleged several economic and safety concerns. The economic concerns are inextricably tied with the implementation of the new routes in the Park. As will be discussed below, if the implementation of the new routes is delayed, the economic concerns are, at a minimum, also delayed. In essence, the safety concerns stem from the Petitioners' position that there is not enough time to train and certify all operators and pilots for operations on the new Grand Canyon routes that are scheduled to be in place on May 1, 1997, and that this would create an inherently unsafe situation in the Grand Canyon. The FAA strongly disagrees with this assertion that implementing the new routes effective May 1, 1997, would be unsafe. Even though the FAA is committed to achieving the substantial restoration of natural quiet in the Park as soon as possible, safety is, and always will be, paramount. To that end, the FAA has been preparing to take dramatic steps to alleviate any potential problems that could adversely affect the safety

of these creative ideas suggest alternatives to both the existing environment at the Park and the proposed environment that could significantly improve the operating situation in both the environmental and operational arenas. These new suggestions have not yet been adequately explored, but are deserving of further investigation and analysis. Additional time would afford the FAA and the Department of the Interior (DOI) an opportunity to review these new ideas. In addition, the FAA is committed to a continued working relationship with the affected Native American tribal units, and the FAA intends to complete consultation with the affected Native American tribes concerning these new route suggestions pursuant to Section 106 of the National Historic Preservation Act. Although the FAA is fully prepared to implement the new route structure on May 1, 1997, as originally proposed, it would be extremely difficult to accommodate the new proposals now being discussed by that date.

The FAA has consulted with the DOI concerning the new suggestions received by the FAA and the need for further consultation. The DOI reexamined the situation at the Park and concluded that the implementation of the curfew as required by the final rule on May 1, 1997, will, on its own, be a significant step to achieving the substantial restoration of natural quiet in the Park. The subsequent implementation of the new air tour route structure, together with the proposal of quiet technology, will form the basis for the next step towards the substantial restoration of natural quiet. The DOI and the FAA have determined that additional time would be beneficial to permit the further exploration of these new ideas submitted by the affected and interested parties, and that a delay in the effective date of the implementation of the new routes in the Park is warranted. Therefore, to permit continued discussions on, and possible changes to, the proposed new routes and to permit further consultation with the Native American tribes, the FAA has determined to delay the effective date of the expansion of the flight-free zones and minimum altitudes as stated in 14 CFR §§ 93.301, 93.305 and 93.307 to January 31, 1998. The effective date of May 1, 1997, for all the other aspects of the rule, i.e., the curfew, aircraft limitations, and reporting requirements, will remain unchanged.

Since the FAA is delaying certain portions of the final rule, as stated above, SFAR 50–2 must be reinstated, and certain portions of the SFAR be extended. The continuation of the SFAR is vital to maintain the existing environmental and safety benefits. Specifically, the FAA finds it necessary to amend Section 9 of the reinstated SFAR 50–2 to extend the provisions of Sections 1, 4, and 5, (i.e., the Special Flight Rules Area, the flight-free zones and the minimum flight altitudes) until January 31, 1998. The termination of SFAR 50–2 Sections 1, 4, and 5 will coincide with the delayed effective date of 14 CFR §§ 93.301, 93.305, and 93.307.

On May 1, 1997, the provisions of the final rule that are unaffected by the pending route structure will go into effect. These provisions consist of the curfew, aircraft limitations, and reporting requirements, and are contained in 14 CFR §§ 93.303, 93.309, 93.311, 93.313, 93.315, 93.316, and 93.317. To avoid redundancy and confusion, the FAA also finds it necessary to remove certain sections of SFAR 50–2 effective May 1, 1997. Sections 2, 3, 6, 7, and 8 will be removed on May 1, 1997 to coincide with the implementation of the above referenced sections of the final rule contained in part 93.

Further Consultation and Review

As mentioned above, during the comment period on the new routes, the FAA received many insightful and cogent comments on the proposed route structure. Consultation with the Native American representatives also produced several useful and valid alternate operational schemes. Many of these ideas received from the comments and through the consultations are

analyzed prior to implementation of airspace changes. Therefore, in light of the comments and additional information received, the FAA will reexamine the proposed route structure in relation to the operating environment in the Park. The FAA expects to revisit the proposed route structure and incorporate several of the above mentioned ideas. Involvement of the interested and affected parties will be crucial in this process.

Notice and Comment

As is explained below, this final rule is being issued without prior notice and comment because of the time constraints. The FAA spent the month of January and most of February receiving and reviewing comments on the proposed routes and consulting with the various affected parties. Had the FAA not received the valuable information on the route structure that it did, the FAA would have been able to transmit the data on the proposed routes to the proper charting authorities (the National Ocean Service (NOS)), and an aeronautical chart would have been available by at least April 1, 1997, that would have been used by the operators for training and navigational purposes. To have the appropriate chart produced by April 1, the FAA would have had to forward the charting data to NOS by February 21, 1997. However, once the FAA started to receive the relevant information from the commenters, the Agency had to make a determination as to whether to proceed with the proposed routes so as to have the routes and the complete Grand Canyon final rule effective and implemented on May 1, or whether to take additional time to analyze the comments and possibly develop a better and more comprehensive route structure that would not go into effect until after the busy summer tourist season.

Further, officials of the Park and NPS had suggested alterations and refinements in the route structure that have the potential to produce noise reduction benefits. They have requested the opportunity to explore these new options with the FAA. Both the FAA and the DOI believe that all these suggested changes could produce a significantly better rule for both the Park users and the aviation operators. Additional time is needed, however, to review, analyze, and implement these route changes, which, again, would preclude a May 1, 1997, effective date.

To permit what the FAA and the DOI believe will culminate in a better overall route structure, the FAA has decided not to send the originally proposed routes to NOS for charting, but to analyze the new ideas with the expectation of creating better routes. Due to the specific and strict requirements of NOS for the charting preparation time, any further alteration to the route structure, such as the ones suggested by DOI and interested parties, make it impossible to meet the charting date necessary for a May 1 effective date. A delay in the charting data to NOS would mean that NOS would not have been able to produce the charts by April 1 and, consequently, operators would not have been able to train their pilots by May 1. Essentially, therefore, any delay in sending the data to NOS results in an equivalent delay of the effective date. With the goal to produce the best routes possible, the FAA determined that it would be contrary to the public interest to implement the originally proposed routes when better alternatives might be available as a result of the comments received and the consultations with DOI and others.

Moreover, past experience has demonstrated that the training of pilots on new routes during a peak tourist season could be unsafe. At the Park, the peak season extends approximately from May through October. To eliminate the potential for unsafe operations within the Park, the FAA further determined that the training should take place in the Park when the volume of air traffic traditionally decreases, i.e., after the summer tourist season. For that reason,

In promulgating the final rule for Special Flight Rules in the Vicinity of the GCNP, the FAA prepared a cost-benefit analysis of the rule. The delay in the implementation of 14 CFR §§ 93.301 and 93.307 will not affect that assessment. The delay in the implementation of § 93.305 will be cost-relieving.

Regulatory Flexibility Analysis

As required by the Regulatory Flexibility Act of 1980, as amended, FAA completed a final regulatory flexibility analysis of the final rule. The delay in the implementation of 14 CFR §§ 93.301, 93.305, and 93.307 will not have an effect on that analysis.

Federalism Implications

The amendment set forth herein will not have substantial direct effects on the States, or the relationship between the national Government and the State, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this amendment does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Accordingly, the Federal Aviation Administration (FAA) amends 14 CFR parts 91, 93, 121, and 135 effective May 1, 1997.

The authority citation for part 121 continues to read as follows:

Authority: 49 USC 106(g), 40113, 40119, 44101, 44701–44702, 44705, 44709–44711, 44713, 44716–44717, 44722, 44901, 44903–44904, 44912, 46105.

SFAR No. 50–2 [Reinstated]

In parts 91, 121, and 135, Special Federal Aviation Regulation No. 50–2 is reinstated, and Sections 2, 3, 6, 7, and 8 are removed.

In parts 91, 121, and 135, Special Federal Aviation Regulation No. 50–2, Section 9 is revised to read as follows:

Section 9. *Termination Date.* Section 1. *Applicability*, Section 4. *Flight-Free Zones*, and Section 5. *Minimum Flight Altitudes*, expire on 0901 UTC, January 31, 1998.

MSL within an area bounded by a line beginning at Lat. 36°09'30" N., Long. 114°03'00" W.; northeast to Lat. 36°14'00" N., Long. 1130°09'50" W.; thence northeast along the boundary of the Grand Canyon National Park to 36°22'55" N., Long. 112°52'00" W.; to Lat. 36°30'30" N., Long. 112°36'15" W. to Lat. 36°21'30" N., Long. 112°00'00" W. to Lat. 36°35'30" N., Long. 111°53'10" W. to Lat. 36°53'00" N., Long. 111°36'45" W. to Lat. 36°53'00" N., Long. 111°33'00" W.; to Lat. 36°19'00"N., Long. 111°50'50" W.; to Lat. 36°17'00" N., Long. 111°42'00" W.; to Lat. 35°59'30" N., Long. 111°42'00" W.; to Lat. 35°57'30" N., Long. 112°03'55" W.; thence counterclockwise via the 5 statute mile radius of the Grand Canyon Airport airport reference point (Lat. 35°57'09" N., Long. 112°08'47" W.) to Lat. 35°57'30" N., Long. 112°14'00" W.; to Lat. 35°57'30" N., Long. 113°11'00" W.; to Lat. 35°42'30" N., Long. 113°11'00" W.; to 35°38'30" N; Long. 113°27'30" W; thence counterclockwise via the 5 statute mile radius of the Peach Springs VORTAC to Lat. 35°41'20" N., Long. 113°36'00" W; to Lat. 35°55'25" N., Long. 113°49'10" W.; to Lat. 35°57'45" N., 113°45'20" W.; thence northwest along the park boundary to Lat. 36°02'20" N., Long. 113°50'15" W; to 36°00'10" N., Long. 113°53'45" W.; thence to the point of beginning.

Section 2. *Definitions.* [Removed]

Section 3. *Aircraft Operations: General.* [Removed]

Section 4. *Flight-Free Zones.* Except in an emergency or if otherwise necessary for safety of flight, or unless otherwise authorized by the Flight Standards District Office for a purpose listed in Section 3(5), no person may operate an aircraft in the Special Flight Rules Area within the following areas:

(a) *Desert View Flight-Free Zone.* Within an area bounded by a line beginning at Lat. 35°59'30" N., Long. 111°46'20" W.; to 35°59'30" N., Long 111°52'45" W.; to Lat. 36°04'50" N., Long 111°52'00" W.; to Lat. 36°06'00" N., Long. 111°46'20" W.; to the point of origin; but not including the airspace at and above 10,500 feet MSL within 1 mile of the western boundary of the zone. The area between the Desert View and Bright Angel Flight-Free Zones is designated the "Zuni Point Corridor."

(b) *Bright Angel Flight-Free Zone.* Within an area bounded by a line beginning at Lat. 35°59'30" N, Long 111°55'30" W.; to Lat. 35°59'30" N, Long 112°04'00" W.; thence counterclockwise via the 5-statute mile radius of the Grand Canyon Airport point (Lat. 35°57'09" N., Long 112°08'47" W.) to Lat. 36°01'30" N., Long. 112°11'00" W.; to Lat. 36°06'15" N., Long. 112°12'50" W.; to Lat. 36°14'40" N., Long. 112°08'50" W.; to Lat. 36°14'40" N., Long. 111°57'30" W.; to Lat. 36°12'30" N., Long. 111°53'50" W.; to the point of origin; but not including the airspace at and above 10,500 feet MSL within 1 mile of the eastern boundary between the southern boundary and Lat. 36°04'50" N. or the airspace at and above 10,500 feet MSL within 2 miles of the northwest boundary. The area bounded by the Bright Angel and Shinumo Flight-Free Zones is designated the "Dragon Corridor."

(c) *Shinumo Flight-Free Zone.* Within an area bounded by a line beginning at Lat. 36°04'00" N., Long. 112°16'40" W.; northwest along the park boundary to a point at Lat. 36°11'45" N., Long. 112°32'15" W.; to Lat. 36°21'15" N., Long. 112°20'20" W.; east along the park boundary to Lat. 36°21'15" N., Long. 112°13'55" W.; to Lat. 36°14'40" N., Long. 112°11'25" W.; to the point of origin. The area between the Thunder River/Toroweap and Shinumo Flight Free Zones is designated the "Fossil Canyon Corridor."

(d) *Toroweap/Thunder River Flight-Free Zone.* Within an area bounded by line beginning at Lat. 36°22'45" N., Long. 112°20'35" W.; thence northeast along the boundary of the Grand Canyon National Park to Lat. 36°15'00" N., Long. 113°03'15" W.; to Lat. 36°15'00" N., Long.

Section 3. *Minimum Flight Altitudes.* Except in an emergency or if otherwise necessary for safety of flight, or unless otherwise authorized by the Flight Standards District Office for a purpose listed in Section 3(b), no person may operate an aircraft in the Special Flight Rules Area at an altitude lower than the following:

(a) Eastern section from Lees Ferry to North Canyon: 5,000 feet MSL.

(5) Eastern section from North Canyon to Boundary Ridge: 6,000 feet MSL.

(c) Boundary Ridge to Supai (Yumtheska) Point: 7,500 feet MSL.

(d) Supai Point to Diamond Creek: 6,500 feet MSL.

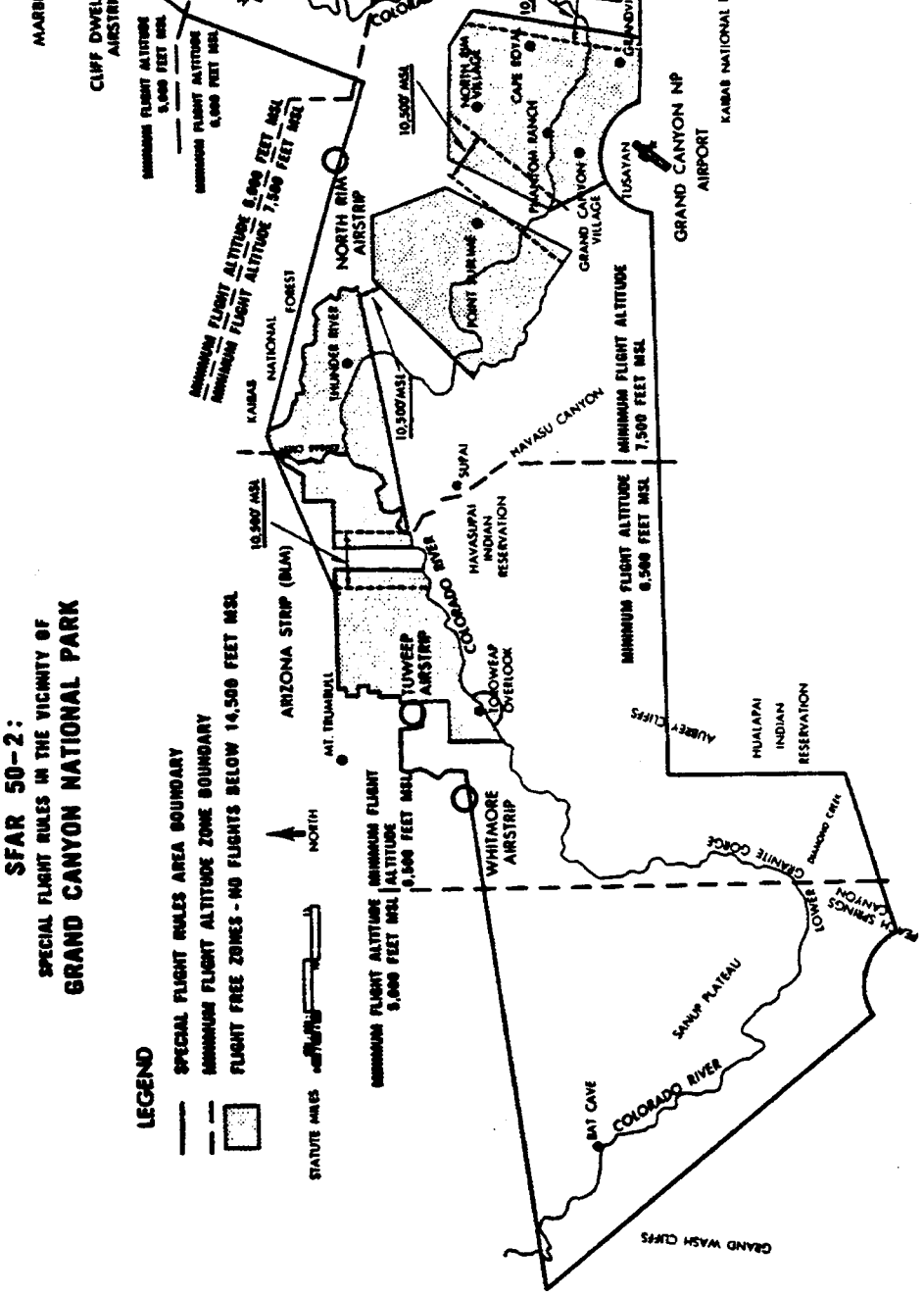
(e) Western section from Diamond Creek to the Grand Wash Cliffs: 5,000 feet MSL.

Section 6. *Commercial Sightseeing Flights.* [Removed]

Section 7. *Minimum Terrain Clearance.* [Removed]

Section 8. *Communications.* [Removed]

Section 9. *Termination Date.* [Section 1. *Applicability*, Section 4. *Flight-Free Zones*, and Section 5. *Minimum Flight Altitudes*, expire on 0901 UTC, January 31, 1998.]


SFAR 50-2:
SPECIAL FLIGHT RULES IN THE VICINITY OF
GRAND CANYON NATIONAL PARK
LEGEND
SPECIAL FLIGHT RULES AREA BOUNDARY
MINIMUM FLIGHT ALTITUDE ZONE BOUNDARY
FLIGHT FREE ZONES - NO FLIGHTS BELOW 14,500 FEET MSL
STATUTE MILES
NORTH
ARIZONA STRIP (BLM)
MT. TRUMBULL
TUWEEP AIRSTRIP
TOROWEAP OVERLOOK
COLORADO RIVER
HAVASUPAI INDIAN RESERVATION
SUPAI
HAVASU CANYON
WHITMORE AIRSTRIP
NORTH RIM AIRSTRIP
KAIBAB NATIONAL FOREST
THUNDER RIVER
POINT SUBLIME
PHANTOM RANCH
GRAND CANYON VILLAGE
NORTH RIM VILLAGE
CAPE ROYAL
TUSAYAN
GRAND CANYON NP AIRPORT
HUALAPAI INDIAN RESERVATION
AUBREY CLIFFS
GRANITE GORGE
DIAMOND CREEK
LOWER GRAND CANYON
SANUP PLATEAU
BAT CAVE
GRAND WASH CLIFFS
MINIMUM FLIGHT ALTITUDE 7,500 FEET MSL
MINIMUM FLIGHT ALTITUDE 8,500 FEET MSL
MINIMUM FLIGHT ALTITUDE 14,500 FEET MSL
10,500' MSL

SUMMARY: This action establishes a temporary Special Federal Aviation Regulation (SFAR) at Rocky Mountain National Park (RMNP) to preserve the natural enjoyment of visitors to RMNP by preventing any potential adverse noise impact from aircraft-based sightseeing overflights. This action temporarily bans commercial air tour operations over RMNP while the FAA develops a broader rule that will apply to RMNP as well as other units of the National Park system. The final rule will expire as soon as a general rule on such overflights is adopted.

FOR FURTHER INFORMATION CONTACT: Neil Saunders, Airspace and Rules Division (ATA–400), Air Traffic Airspace Management, Federal Aviation Administration, 800 Independence Avenue, SW, Washington, DC 20591; telephone (202) 267–8783. For the Final Environmental Assessment and Finding of No Significant Impact, contact Mr. William J. Marx, Manager, Environmental Programs Division (ATA–300), Office of Air Traffic Airspace Management, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone (202) 267–3075.

SUPPLEMENTARY INFORMATION:

Availability of the Final Rule

Any person may obtain a copy of this final rule by submitting a request to the Federal Aviation Administration, Office of Rulemaking (ARM–1), 800 Independence Avenue, SW, Washington, DC 20591, or by calling (202) 267–9677. Communications must identify the amendment number of this final rule.

Background

The designation of an area as a National Park is one of the highest recognition given to any area in the country for its natural beauty and the importance of its protection. In view of the significance of this designation, Congress requires that National Parks by managed consistently with the ''high public value and integrity of the National Park System and [such management] shall not be exercised in derogation of the values and purposes for which these areas have been established to conserve the scenery and the nature and the historic objects and the wildlife therein, and to leave them unimpaired for future generations.'' Organic Act, 16 U.S.C. § 1a–1; 16 U.S.C. 273–273d, 273f. The National Park Service (''NPS'') and the Federal Aviation Administration (''FAA'') recognize that noise from aircraft may interfere with the natural park experience for visitors on the ground and with efforts to preserve these and other park values.

On December 22, 1993, the Department of the Interior and the Department of Transportation joined to form an interagency working group (''IWG'') with the objective of protecting National Parks from the adverse effects due to excessive aircraft noise. The IWG's tasks included reviewing the environmental and safety concerns caused by park overflights, and working towards resolution of impacts on specific parks.

The FAA's role in the IWG is to ensure the maintenance of aviation safety and provide for the safe and efficient use of airspace, while working with the Department of the Interior to achieve its role in the IWG to protect public land resources in the national park system, preserve environmental values for those areas, and provide for the public enjoyment of those areas.

FAA Statutory Authority

The FAA has broad authority and responsibility to regulate the operation of aircraft and the use of the navigable airspace and to establish safety standards for and regulate the certification of airmen, aircraft, and air carriers. 49 U.S.C. 40104, *et seq.*, 49 U.S.C. 40103(b). Subtitle VII of Title 49 U.S.C. provides guidance to the Administrator in carrying out this responsibility. However, the FAA's authority is not limited to regulation for aviation safety and efficiency.

The FAA has authority to manage the navigable airspace to protect persons and property on the ground. The Administrator is authorized to "prescribe air traffic regulations on the flight of aircraft (including regulations on safe altitudes) for . . . . (B) protecting individuals and property on the ground" 49 USC 40103(b)(2). In addition, under 49 USC Section 44715(a) the Administrator of the FAA, in consultation with the Environmental Protection Agency, is directed to issue such regulations as the FAA may find necessary to control and abate aircraft noise and sonic boom to "relieve and protect the public health and welfare."

The FAA construes these provisions, taken together, to authorize the adoption of this regulation, which is intended to minimize the limit the adverse effects of aircraft noise to protect visitor enjoyment of RMNP. The FAA finds that the regulation of the navigable airspace, as authorized under 49 U.S.C. 40103(b)(2), is necessary, on a temporary, limited basis, as discussed below, to control and abate aircraft noise at RMNP under 49 U.S.C. 44715. Current policies support the exercise of FAA authority to protect the RMNP in these unique circumstances, at least as an interim step while the FAA proceeds to complete a rulemaking that will address the larger issue of protecting national parks. See generally, Section 101 of the National Environmental Policy Act of 1969, as amended 42 U.S.C. 4321 and Executive Order 11514, as amended by Executive Order 11991.

Rocky Mountain National Park

RMNP receives approximately three million visitors a year, making it the sixth most visited national park in the United States, despite its relatively small size (for a major Western national park) of 265,727 acres. RMNP is located approximately 40 miles outside the city limits of Denver, Colorado, and approximately 50 miles from the Denver International Airport. The topography of the park is characterized by steep mountains, narrow valleys, and high elevations (8,000 to 14,250 ft). Seventy percent of park terrain is above 10,000 feet. In fact, excluding Hawaii and Alaska, RMNP has the highest percentage of mountainous elevations above 10,000 feet, compared to any other national park.

RMNP presents pilots with a challenging flying environment. It has high winds, often in excess of 100 mph. The Park's high altitudes diminish engine performance and propeller efficiency, making it more difficult for an aircraft to perform in high winds. The rugged terrain limits maneuverability, and the rapidly changing weather can unexpectedly envelop an aircraft. Perhaps in part for these reasons, the use of the airspace over RMNP for commercial air tour operations has so far not been extensive. Unlike many other national parks, there are currently no air tour operators overflying the park or operating in the surrounding airspace. However, other aviation users do operate in the airspace above RMNP. Due to the Park's proximity to the Denver International Airport, aircraft operating to or from the airport overfly RMNP. Arrival and departure routes above the Park are necessary to ensure the safe and efficient handling of air traffic into the airport. Traffic into the airport operates at minimum altitudes of 19,000 feet above mean sea level (MSL) for jets and 16,000 feet above MSL for turboprop aircraft. Non-commercial general aviation aircraft also overfly the Park. While

facto wilderness until action is taken by Congress. This means that, among other things, most motorized vehicles must be contained within the existing roadway system, and future development is limited.

The Governor of Colorado, members of the Colorado Congressional delegation, and other officials have requested the Department of Transportation to place a preemptive ban on commercial air tour operations at RMNP. Even though there are no commercial air tour operations at the Park currently, some operators have expressed an interest in starting commercial air tours to officials of Estes Park, Colorado and to the NPS. The government officials who have requested regulatory action are concerned that an influx of commercial air tour operations at RMNP would undermine the enjoyment of the Park by visitors on the ground.

The FAA wishes to be responsive to concerns about the effects of overflights on the national park system. Although the FAA is still developing nationwide standards for overflights of national parks, a relatively unusual set of circumstances has occurred at RMNP. Judging from the requests received by the FAA, there is broad support to protect the park environment by a ban on overflights among local leaders, even in the absence of current commercial air tour overflights. In addition, the FAA acknowledges the value in being able to take the initiative now, before any commercial overflights occur. At this point, there has been no environmental loss from commercial air tour overflights, and a temporary ban on such flights will cause no economic loss to any incumbent operator.

This temporary Special Federal Aviation Regulation will expire as soon as a general rule on overflights over the national park system is adopted. The FAA and DOI will be collecting quantitative data in conjunction with the development of this broader rule that will apply to all units of the National Park System.

Within 24 months of the effective date of this temporary ban, the FAA, in conjunction with the NPS, will complete a review of this temporary ban on commercial air tour operations over RMNP and publish its findings in the *Federal Register*. The FAA will determine whether the ban continues to be necessary to meet the objectives of the FAA and NPS. This review will consider any data collected during the development of the broader rule, as well as any other additional data that could be relevant to the temporary ban. The FAA also will consider any new issues relevant to RMNP that may have arisen, the effect of the temporary ban on the benefits of the park experience, including natural quiet, and any unanticipated burden the ban may have imposed on the air tour industry.

Discussion of Comments

A. Introduction

On May 15, 1996 (61 FR 24582), the FAA published an NPRM proposing several alternative methods of preserving the natural park experience of Rocky Mountain National Park by imposing restrictions on commercial aircraft-based sightseeing overflights. Commenters were invited to address three alternatives: (1) A total ban; (2) limits on operations, and (3) a voluntary agreement. As of September 1, 1996, the FAA received 4,527 comments from individuals, air tour operators from other geographic locations, environmental and civic organizations, state and local governments, and groups representing the interests of various segments of aviation. The overwhelming majority of these commenters favor Alternative One, a ban on overflights of RMNP, while a minority of commenters, virtually all representing aviation interests (e.g., National Air Transport Association (NATA), Airline Owners and Pilots Association (AOPA), and Helicopter Association

at Rocky Mountain National Park.

A summary of the views presented by the commenters follows. First, the general issues raised by the commenters are discussed. Second, the three alternatives included in the NPRM are explained and commenters' arguments supporting and opposing each alternative are summarized.

B. General Issues Raised by Commenters

1. FAA Authority and Procedural Rules

Helicopter Association International (HAI) (comment 4357) states that this NPRM does not cite a statutory basis for the proposed action, but if the basis is 49 U.S.C. 44715, the FAA failed to consult the Environmental Protection Agency (EPA). HAI also states that the NPRM exceeds the mandate of Congress as stated in Public Law 100–91 to "provide for the substantial restoration of the natural quiet and experience of the park and protection of public health and safety from adverse effects associated with aircraft overflight in the Grand Canyon National Park." The primary concern of HAI is that there is no Congressional mandate to restore the natural quiet in the RMNP. Additionally, HAI claims that the NPRM is not in compliance with the Administrative Procedure Act, in that the NPRM is not informative enough to allow a concerned party the opportunity to comment appropriately, is not promulgated on the basis of safety, but on the unsubstantiated and subjective environmental impacts of future overflights, and is not in compliance with the FAA's own procedural requirements in Title 14 of the Code of Federal Regulations (14 CFR) part 11.65. HAI also cites the lack of an Environmental Impact Statement (EIS).

National Air Transport Association (NATA) (comment 4229) states that this NPRM allows federal land management agencies like the NPS to "effectively usurp FAA jurisdiction over air traffic and airspace itself" which is contrary to the Federal Aviation Act of 1958 that ". . . specifically charge[d] the FAA with assuring safety and fostering the development of air commerce." NATA and HAI state that this NPRM represents an undue threat to the public right of transit through the navigable airspace of the U.S. as provided for in Section 104 of the Federal Aviation Act. For the FAA to propose such a rulemaking would be to remove its authority to promote air commerce and safety, which would be "an incomprehensible dereliction of responsibility," in NATA's opinion.

The United States Air Tour Association (USATA) (comment 4563) states that the FAA fails to cite the statutory authority for the rulemaking, which it suggests is a tacit indication that the FAA does not have the requisite statutory authority to enact the rules put forth in the NPRM.

The Colorado Pilots Association, Inc. (comment 4429) states that the proposed ban would act as an unreasonable interference with interstate and intrastate commerce.

The National Association of State Aviation Officials (NASAO) (comment 4433) points out in a resolution issued at its Washington conference on March 10, 1996, that the proposed rule would give the NPS authority to direct the FAA in the use of the national airspace, which would be interfering with the FAA's mandate under Federal law.

Southwest Safaris (comment 4583) comments that the FAA does not have the regulatory power, as determined by Congress, to regulate that which does not exist. This commenter adds that the FAA was mandated by Congress to foster and promote the growth of commercial aviation, not to "regulate it out of existence" and that if the NPRM is implemented, commercial

[so as to] conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations'' (16 U.S.C. 1). This commenter contends that regulating overflights over the RMNP does nothing to maintain the objectives listed above.

In contrasts, the Sierra Club/Grand Canyon Chapter (comment 2035) and the Citizens for Aircraft Noise Abatement/Sedona (CANA/S) (comment 4227) contend that natural quiet has been identified by the Park Service as a resource, citing the National Park Service Organic Act, as amended by the Redwoods Act of 1978, that defines resource preservation as the primary goal of the national parks. In addition, these commenters cite the Wilderness Act of 1964, which was enacted to protect the ''primeval character'' of designated lands and to provide ''outstanding opportunities for solitude.''

The Utah Air Travel Commission (comment 1113) oppose the NPRM because it questions the thoroughness and completeness of the scientific basis of the NPS's Report to Congress, in which aircraft noise alone was singled out as obtrusive, making this report both incomplete and biased. This commenter believes a new study is required, complete with the identification of all obtrusive noise source, before further regulation of park airspace is enacted. In addition, this operations of national parks may violate the Americans with Disabilities Act. This commenter is also concerned with the unconditional restriction imposed on aircraft due to noise, and asks if silent engines of the future will still be restricted.

The Utah Air Travel Commission also cites the conclusion of a study, Tour Passenger Survey Results, that the NPS considered biased because it was a survey of air tour passengers. The Commission believes that while the study may be incomplete, it does not recommend the elimination of park overflights; rather, it identifies the major value of overflights. This, in the commenter's opinion, indicates that no further regulation of overflights is warranted or needed.

2. Lack of Safety Justification of Any Rulemaking

The HAI (comment 4357) opposed the NPRM because there are no studies stating that the proposed rules will promote aviation safety or protect the environment and there has been no research conducted stating that health issues will be advanced.

The Montana Department of Transportation (comment 4349) asserts that aircraft overflights do not damage scenery, natural and historical objects or wildlife in the parks. Therefore, this commenter opposes this NPRM as it believes that ''all categories of aviation are already by the use of navigable airspace for all respective flight activities at this time.''

The Colorado Pilots Association, Inc. (comment 4429) states that the proposed ban is unnecessary because aerial tours do not operate over RMNP for obvious reasons: the high altitudes of the park; aircraft loading factors; and the attendant operating costs associated with running successful aerial tour operations. Thus, ''it is inappropriate to restrict an activity that is unlikely to ever occur.''

Geo-Seis (comment 4350), a part 135 certificate holder and provider of certain air tour operations in various parts of the U.S., oppose the NPRM, contending that ''while no specific plans currently exist, [it] is an operator that is contemplating operations in the RMNP,'' especially given the close proximity of its offices to the Park and the type of helicopters this company operates. This commenter asserts that since it operates high altitude helicopters with an excellent safety record, it requests the FAA to reconsider prohibiting helicopter operations in the RMNP in the future.

parks while engaging in normal operations. NBAA is opposed to regulation prohibiting overflights by persons other than those engaged in for-hire sightseeing service because ''there is no substantial evidence of significant noise impact on park area from normal (non-sightseeing) overflights by general aviation aircraft.'' Each of these commenters are wary of the implications of the NPRM based on the Grand Canyon National Park Rule, that is their opinion, are inherently discriminatory towards general aviation. AOPA (comment 4356) contends that due to the Grand Canyon National Park Rule, general aviation is required to fly higher altitudes than air tour operators, even though it constitutes very little transient traffic, as opposed to the thousands of overflights conducted by air tour operators. A similar point is made by NASAO (comment 4433). Several of the commenters point out that general aviation does not disturb the natural quiet of RMNP, and the current voluntary overflight altitude of 2,000 feet is one result of voluntary cooperation.

The Grand Canyon Air Tour Council (comment 2006) comments that the RMNP proposal is not separable from the FAA's and the Department of the Interior's project to develop national standards that will attempt to regulate all air traffic over all national parks and other possible federal land, and states that the broader issue ''needs to be brought into the public domain for proper viewing.'' The council recommends a voluntary agreement until the debate on national standards for park overflights is available for national scrutiny.

AOPA (comment 4356) opposes any altitude restrictions for general aviation over RMNP. It asserts that general aviation does not disturb the natural quiet of the RMNP, and the current voluntary overflight altitude of 2,000 feet has served well to negate the potential impact of general aviation overflights.

4. Economic Considerations

Since there are no operators currently performing sightseeing air tour operations over RMNP, the FAA in the NPRM determined that the expected impact of this regulatory action is negligible and that this proposed amendment would not have a significant impact on a substantial number of small entities. Since operators may be considering starting these types of operations over the park in the future, the FAA asked for comment on whether any person intends to institute commercial sightseeing operations at RMNP.

HAI (comment 4357) disagrees with the rationale that there was no need to conduct a regulatory impact analysis because ''there are no operators currently performing sightseeing air tour operators over RMNP, therefore the regulatory impact is negligible.'' HAI states that it is incumbent upon the FAA that an analysis of the future impact of this rule be conducted.

The Grand Canyon Air Tour Council (comment 2006) claims that the cost issue is not fully considered by the FAA. This commenter asserts that if the FAA can use a potential noise issue to justify its proposal it can use potential air tour operation in determining what is and what is not a cost on society. It recommends that the FAA: (1) Assess the monetary value of the RMNP's worth to society; (2) examine the potential revenue that could be appropriately generated through present and future business development (including air tours); and (3) develop a financial mode that would attempt to ascertain cost to society versus other values, e.g., the opportunity to see the seventy percent of the RMNP terrain that is above 10,000 feet.

The Grand Canyon Air Tour Council further asserts that it is very difficult to comprehend how the FAA concluded in the Regulatory Evaluation section that ''this rule would not have a significant impact on a substantial number of small entities and would not constitute a barrier to international trade.'' The council states that the majority of air tour operators fall

in a 1994 report to Congress, the NPS recommended the use of quiet aircraft technology as a means to reduce the noise effect on National Parks.

C. Proposed Alternatives

The NPRM outlined three alternative methods of preserving the natural enjoyment at RMNP and requested specific comments on how such agreements could be handled. Alternative One would ban commercial aviation sightseeing tours in the vicinity of RMNP. Alternative Two would allow commercial sightseeing tours, but would restrict the operations to routes that would be restricted to minimum altitudes and would follow the existing road system, among other restrictions. Variations of this alternative were presented in the NPRM. Alternative Three would call for voluntary agreements between air tour operators and the NPS.

Since there were no air tour operators conducting overflights at the time the NPRM was proposed, the three proposed alternatives were an attempt to provide a fair representation of the possible ways to mitigate the predicted effect of aircraft noise generated by future air tour operators. Using the alternatives, which included suggestions ranging from the maintenance of the status quo through the use of voluntary agreements and restrictions on time, season, and altitudes, to a complete ban on all future air tour operations, the FAA made an informed decision. After considering the public policy favoring the preservation of the natural enjoyment of our National Parks, the strong demand from Colorado residents to ban commercial air tour overflights, the special situation and unique features of RMNP, and the numerous comments and alternatives, the FAA concluded that a ban on commercial air tour operations over RMNP will ultimately inure to the benefit of all. In effect, the ban will operate to preserve the status quo, because there are currently no commercial air tour operations at RMNP. The ban clearly protects the enjoyment of the park while avoiding the imposition of restrictions that would result in a less than meaningful opportunity for commercial air tours to operate over RMNP.

1. Alternative One—Ban Sightseeing Tours

a. *Support.* The majority of commenters (99 percent) support a ban on commercial aviation sightseeing tours. Most of these commenters are individuals who live near the park and/or have visited the park. Organizations that support a ban include: CANA/S, Sierra Club, NPCA, Wilderness Land Trust, League of Women Voters, Town of Estes Park, Estes Valley Improvement Association, Inc., Larimer County Board of County Commissioners, The Wilderness Society, and other local governmental and non-governmental organizations. Reasons that commenters give for supporting the ban include:

(i) *Preserve the Natural Enjoyment of the Park.* Commenters stress that the total ban would preserve the natural enjoyment and tranquillity of the park, which is what visitors value most in their national park experience. Some commenters cite statistics. e.g., 96 percent of park visitors value tranquillity, and 81 percent of park visitors are directly opposed to tour overflights. Some commenters point out that most of the park's visitors come from urban areas and are seeking the peace and quiet offered by the park. Others point out that the original purpose of national parks and wilderness areas was to provide this natural tranquillity and that overflights would destroy this objective.

Commenters assert that the allowance of overflights at other national parks (e.g., Grand Canyon National Park) has resulted in unacceptable noise levels which spoil the experience of park visitors. For example, commenter #2698 says that commercial sightseeing tours in

Secretary Federico Peña (dated July 31, 1996); and the other from the Forest Service Chief Jack Ward Thomas to Secretary Glickman (dated April 11, 1996): ''We believe that commercial helicopter flights over wildernesses are inconsistent with the values for which these areas were established by Congress.''

Estes Valley Improvement Association (comment 155) claims that tour operations would shatter the silences in the RMNP ''bowl of a valley.'' It is this commenter's belief that because the air is thin in this area, larger and stronger helicopter engines would be necessary. This would result in unendurable noise in the valley, thereby negatively impacting the ground tourism as well as the quality of life for the residents of the area.

The NPCA (comment 3634) states that, unlike commercial passenger jets and general aviation operations, commercial air tour operations are characterized by frequent, low-altitude flying to maximize contact with scenic points of interest. From the perspective of NPCA's members, this impacts on the park visitor's experience and the preservation of natural quiet.

(ii) *Safety.* Estes Valley Improvement Association (comment 155) cites the danger that tour operators would put themselves in by flying in an area known for extreme variations in weather, as sudden storms are common in the Great Divide and have been known to destroy airplanes. This, in turn, is a great source of danger for helicopters, people on the ground, and rescue operations.

Another commenter (comment 1335), based on his experience as a park ranger at the RMNP, states that bursts of wind would prove difficult for piston-engine aircraft to maintain altitude, air speed, and control when operating in the ''rarefied air of these altitudes'' of the RMNP. Also, he comments that the terrain of the park is more vertical than horizontal and is not safe for the operation of any aircraft and that a further danger would be for rescue personnel and victims of an incident. He cites the specific example of a recent airplane accident on Mount Epsilon, where the plane exploded from impact on the mountainside; when the airplane and pilot were found, there was no safe way to retrieve the pilot's body due to the potential of avalanches caused by the perilous plane position on the snow cornices on top of the cliff.

One commenter asserts that Alternative One would ensure the safety of park visitors (passengers on overflights and visitors on the ground) by preventing flying in a potentially unsafe mountainous area with varying elevations and unpredictable weather conditions (e.g., quick-forming thunderstorms, strong mountain wave winds and accompanying turbulence). One commenter (comment 540) also asserts that the crash of any aircraft could likely ignite a catastrophic forest fire.

(iii) *Wildlife.* From an ecological standpoint, commenters 295 and 1335 assert that increased air traffic can affect animals in many negative ways: adversely affecting breeding behaviors of birds and mammals, interrupting nesting habits, and causing stress to certain species. Animals indigenous to these areas are apt to respond to this noise stress by either migrating from the area or simply dying off, unable to handle the stress to their natural habitat. In addition, there may be an increased danger from rock falls and avalanches. To this commenter, the most important issue is that the RMNP should serve as a tranquil refuge to the wildlife. Posing a similar ecological concern, a park ranger (comment 1335) mentions the greater pollution problem when dealing with airplane crashes, scattering fuel loads and airplane parts throughout the fragile tundra ecosystems, which require years to recover from such accidents.

vans to accommodate them. The Wilderness Land Trust (comment 2027) similarly assert that there are opportunities to partake of the scenic vistas, making aviation sightseeing unnecessary.

Visitors who cannot or choose not to see the park on foot can already get a good view of the park and look down on the mountains by driving on one of the park's several roads (e.g., Trail Ridge Road) or by using the handicap accessible trails. Thus, overflights are unnecessary.

(v) *Cost.* CANA/S (comment 4227) states that the benefit (natural quiet for the vast majority of visitors and residents who value this resource) of Alternative One justifies its costs (a disappointed prospective air tour operator of some unknown time in the future). The same analysis applies to the option of maintaining the status quo (avoiding any additional expenses now), which according to this commenter does not ''justify its costs (uncertainty about the advent of RMNP air tours, as well as the failure of FAA to address problems in their early or pre-existent stages, not to mention even higher expenses to solve problems retroactively.)'' The benefits of Alternatives Two and Three (economic transactions between the few and the fewer) do not justify their costs (shattered natural quiet for most individuals, and enormous governmental expenses for dealing with the problems).

(vi) *Other.* The Wilderness Society (comment 4457) states that, as has occurred at other national parks, correction of overflight problems will be virtually impossible once commercial flights have become established. Thus, FAA action is necessary to preclude the establishment of commercial air tour operations within RMNP and provide the highest degree of protection for the park's resources and visitors.

The Sierra Club, Grand Canyon Chapter (comment 2035) strongly supports Alternative One and adds the following recommendations: the rule should be implemented permanently; four bordering Congressionally designated wilderness areas should also be covered under this no-air-tour-flight rule, specifically, Comanche Peak, Indian Peak, Neota, and the Neversummer Wildernesses; general aviation should be subjected to the same rule as air tour operators, except that low altitude flights may be required for emergency purposes like search and rescue, fire-fighting, etc.; and the rule should apply to airspace adjacent to the protected areas as well.

b. *Oppose.* (i) Air Transportation—Least Damaging. Commenters such as the HAI (comment 4357) and Geo-Seis (comment 4350) claim that helicopters and other air tours are the most environmentally sound means to enjoy RMNP because, unlike those visitors on foot, the air tour visitors do not trample vegetation, disturb artifacts or leave behind any refuse. In addition, air tours do not require roads or other infrastructure development. More importantly, they provide a service to the handicapped and elderly, who would not otherwise be able to visit the park. Finally, these tours may fulfill the need to provide rescue and emergency airlift.

NATA (comment 4229) and HAI (comment 4357) state that these proposals are discriminatory in nature as no other modes of access to the Park have been proposed to be limited. NATA states that ground traffic ''extol a much more tangible price on the natural beauty of the Park'' while air tours ''leave no residual effects within the Park that affect the enjoyment of the Park by persons on the ground.''

(ii) *Temporary Ban While Studying.* NATA (comment 4229) notes that the idea behind the prohibition of all flights is to allow the FAA and NPS the opportunity to ''study the situation and to develop a plan for controlling these overflights to minimize or eliminate their effect on park visitors on the ground.'' This commenter thinks that this alternative is counter-

4565) points out that, according to the NPRM, commercial aircraft currently overfly the park on a daily basis at 19,000 and 16,000 feet above mean sea level (MSL). USATA says that these altitudes are less than 2,000 feet above the highest peaks and also adds that, since seventy percent of the park terrain at RMNP is 10,000 feet MSL, most of the general aviation aircraft currently flying through RMNP are following routes where the Park's peaks rise above these aircraft. USATA states that with numerous aircraft moving in, around and above RMNP, NPS officials, in discussions with the FAA, have found that these aircraft have not caused any serious noise problem. USATA believes that air tour aircraft are akin to general aviation aircraft and commercial overflights, and if used properly, would present negligible effects.

(iv) *Other.* Temsco Helicopters (comment 4575), an operator that conducts air tours in Alaska, says that prohibiting air tours would be discriminatory to air tour operators. This commenter also says that alternative one would create interpretation problems. For example, ''are flights that are point to point but fly through RMNP air tours? Is a photo flight an air tour?''

2. Alternative Two—Permit Sightseeing tours with Limitations

a. *Support.* Geo-Seis (comment 4350) would support some time-specific restrictions under this option and suggests that the times be modified to parallel optimum flight conditions, which are primarily earlier in the mornings to mid-afternoon.

b. Oppose. (i) Enforcement. The Estes Valley Improvement Association (comment 155) claims that limiting operations is completely unsatisfactory primarily because of the inability of any agency to monitor this regulation. This commenter and others believe that the proposed requirement of flying 2,000 feet above ground-level is not practical or enforceable since the ground-level varies so drastically from 7,500 to 14,255 feet.

CANA/S (comment 4227) claims that the FAA's 2,000-foot above-ground-level guideline for flights over noise-sensitive areas is routinely ignored by air tour operators. In addition, HAI's flight guidelines are also often ignored.

An individual commenter (comment 325) says that a 2,000 ft. above ground level restriction is meaningless because ''[o]ver much of the park's terrain hikers could throw rocks down on the occupants of a plane complying with the restriction.'' Also, seasonal restrictions are meaningless because the park is used year-round by skiers and others.

(ii) Noise Issue. Estes Valley Improvement Association (comment 155) states that since noise from aircraft reverberates all over the valley, this option to keep flying only over roads would not solve the reduction in noise issue, as this area is where the highest percentage of residents, visitors and lower groups of animals would be affected.

Similarly, CANA/S (comment 4227) adds, noise from aircraft flying at 2,100 feet above ground is, for all intents and purposes, indistinguishable from that at 2,000 feet. Therefore, this alternative and the voluntary agreement fail to address many aspects of the natural quiet equation. This commenter adds, according to NPS's 1992 *Aircraft Overflight Study: Effect of Aircraft Altitude upon Sound Levels at the Ground,* any doubling of flight altitude (say from 2,000 feet to 4,000 feet) would, based on divergence alone, result in only a 12 decibel reduction (NPS, page 3). This commenter contends that this may be helpful in the instance of already quiet aircraft, but loud aircraft would still shatter the quiet.

The Wilderness Society (comment 4457) states that the restrictions of Alternative Two would not eliminate the degradation of visitors' experiences. Routing flights over road corridors would mean that more visitors would be affected by the noise, and routing flights over

ment of the Park by visitors on the ground by limiting air tour operations during these periods. However, NATA asserts, no quantifiable data exists as to how limiting air access to the Park will enhance the experience of visitors on the ground. According to a survey of Park users conducted by the NPS, about 90 percent of the visitors to the Park stated that their enjoyment of the Park would be affected by helicopter noise. This commenter states that using this data to limit all overflight operations is ludicrous, and ''the FAA cannot apply theoretical data to a nonexisting situation.''

HAI (comment 4357) believes that this NPRM does not provide sufficient information for meaningful comment. For instance, no information on what routes are considered in Alternative Two was included and there are no maps or charts provided for an analysis of proposed routes. This lack of information makes it impossible to comment in detail.

(iv) Other. NPCA (comment 3634) states that, in a park environment that is totally free of commercial air tour activity, placing limitations on operations would invite the establishment of such activity. NPCA adds that any limit, less restrictive than a total and permanent ban, would result in the derogation of park values rather than any improvement of current conditions.

Temsco Helicopters (comment 4575), which supports alternative three, states that time and seasonal restrictions of alternative two would make any kind of air tour operation unworkable. For example, seasonal restrictions would make operations economically unfeasible and would close the park to one type or class of visitor for a portion of the year.

USATA (comment 4563) disapproves of imposing limits on the routes used by air tour aircraft and points out that the ability of these aircraft to operate away from populated areas is a positive factor. USATA states that air tours would cause the least amount of environmental damage to wilderness areas and would therefore be supporting the mission of the Wilderness Act to preserve the ''primeval character and influence'' of these areas.

USATA goes on to point out its difficulties with Variants A, B, and C. USATA says that the 2,000 feet AGL limitation of Variant A would be in effect a ''one-size-fits-all'' approach would could exacerbate the presence of sound from aircraft; this was the case in Haleakala National Park which was required to meet a 1,500 foot AGL minimum by SFAR 71. USATA also states that the time limitations of Variant B would be unreasonable because it would be impossible to present many of the wonders of the park in the absence of flight. Finally, USATA says that the seasonal limitations of Variant C would threaten the viability of air tour operations seeking to operate in RMNP because many of these companies would need to operate year round in order to stay in business.

3. Alternative 3—Voluntary Agreement

a. *Support.* The Grand Canyon Air Tour Council (comment 2006) contends that this is the only viable option. This commenter believes that a voluntary agreement is necessary, because such an agreement provides a solution ''where no authority exists for effecting regulatory options (as in the case of this RMNP NPRM).'' This commenter provides reasons why the other two alternatives are not acceptable: the disregard to the interests of the elderly and handicapped to have air tour availability in the RMNP, the lack of an Environmental Impact Statement prior to the implementation of the proposed SFAR, and the fact that this proposal is based on a request by Colorado's Governor, the Congressional delegation, and other officials from Colorado specifically, none of whom are the owners of this national park and do not represent a federal statutory authority nor a legislative mandate. Therefore, in this commenter's opinion, it ''would appear incumbent upon the FAA to decide to proceed only with Alternative Three

Geo-Sets (comment 4350), an air tour operator, believes that given the personal preferences of paying customers on these flights and limitations on flights due to adverse weather conditions, voluntary and satisfactory operating agreements could easily be established with most operators.

AOPA (comment 4356) believes "cooperation between general aviation pilots and the NPS has always been a cornerstone of aviation's efforts to preserve the park experience of ground visitors. The current voluntary overflight altitude of 2,000 feet is one result of this cooperation."

USATA (comment 4563) supports the use of voluntary agreements and says that its organization would work with the FAA, NPS, and others in drafting a letter of agreement. The agreement should address these issues: (1) areas that would be covered, (2) possible restrictions and identities of the participants, (3) discussion on how an agreement would be implemented in the necessary time frame, (4) how an altitude restriction would be enforced, (5) suggested penalties for violations, and (6) the circumstances under which an agreement could be terminated.

b. *Oppose.* Many commenters say that voluntary compliance is unrealistic because operators would not voluntarily limit their own profits and because it would be difficult to enforce. For example, commenter #325 says that the park is sufficiently large to be a challenge to monitoring of compliance.

The Estes Valley Improvement Association (comment 155) believes that this proposal is completely unrealistic since, currently, operators do not exist in the RMNP, and no possible route of overflights could make tolerable the noise which would fill the Valley and the Park.

NPCA (comment 3634) states that voluntary agreements have a history of failure and cites the experience at Hawaii Volcanoes National Park where many operators, after having given verbal agreements to park management, backed away from written agreements for fear that a rogue operator would capitalize on non-compliance and seize market share. Similarly, the Wilderness Society (comment 4457) states that voluntary agreements have not successfully protected park resources and that violations occur for which the Park Service has no recourse.

On the NPRM's use of the Statue of Liberty and Jefferson National Expansion Memorial as examples of successful voluntary flight agreements, CANA/S (comment 4227) refutes the ability of the FAA to use them as examples. These locales are site-specific, urban ones, where "natural quiet" did not already exist to any appreciable degree, particularly with the 500-foot above ground level altitude agreements in effect. These locales are in no way comparable to those of much more vast territory, much of it wilderness, and much of it relatively quiet. The sightseeing objective of those two examples is to swoop around a single entity. Similarly, NATA (comment 4229) claims that while these self-regulated, self-policing cases have been successful for those specific parks, no air tour operators currently provide service to the RMNP, and no agreements can be made between the government and "air tour operators which may exist in the future."

Response to Comments

As will be described in greater detail below, the comments offered many cogent and informative remarks for consideration by the FAA. The number and quality of the comments received demonstrated to the FAA the importance and complexity of this issue as it relates to RMNP. All comments were thoroughly read and analyzed.

Many of the commenters offered similar arguments for either acceptance or rejection of the various alternatives presented in the NPRM. Due to the vast number of the comments, the section below is a summary of the assertions alleged in the comments and the corresponding response by the FAA.

The allegation that the NPS has assumed jurisdiction for the management of the national airspace is unfounded. The FAA and NPS worked closely together, however, to base any regulatory action on FAA's statutory authority and responsibility. Toward this end, for example, no action was even proposed until the FAA made a determination that there would be no adverse effect on aviation safety in navigable airspace from any of the proposals stated in the NPRM.

Several commenters argued that the FAA lacked the authority to regulate a problem that "does not exist." These commenters argue that it is premature for the FAA to regulate this area, where commercial air tours do not presently operate over RMNP. The Administrator of the FAA is charged with the duty of regulating the use of the navigable airspace, adopting regulations deemed necessary to abate aircraft noise, and protecting persons and property on the ground. The Administrator has the authority to regulate whenever previous history or evidence has revealed a propensity for future problems.

The FAA acknowledges that each of the national parks differ in their topography, nature, size and purpose, but certain experiences found in one park also occur in other parks. Experience with commercial air tour operations in Badlands National Park, Bryce Canyon National Park, Glacier National Park, Glacier Bay National Park, Great Smokey Mountains National Park, Grand Canyon National Park and Mt. Rushmore National Memorial have demonstrated the rise in the number of commercial air tour operations conducted over the parks and a concomitant increase in the noise from such operations.

For example, at Glacier National Park, The NPS estimates that from 1986–1996 the number of fixed wing and helicopter tours at the park increased from 100 to 800 and the number of tour operators from one to five. At Badlands National Park, NPS estimates that the single air tour operator offering helicopter tours conducted over 400 flights in a five month period, or an average of three flights per hour during peak periods. These flights are repetitive in nature concentrated in two basic circular flight patterns over the same area again and again, constantly disturbing the quiet of the park. The air tour operations have led to numerous complaints by visitors to the park.

Bryce Canyon has air tour operations from several locations within the vicinity of the park. At Bryce Canyon Airport, located 3.5 miles north of the park, NPS reports that the number of enplanements has increased dramatically from 1299 in 1991 to approximately 4700 per year in the current year. Likewise, the number of air tour operators, from all locations, has increased from one to five. At the Mt. Rushmore National Memorial, the Park Service estimates that the number of overflights has increased from 2400 per year to 4000 per year along with an increase of tour operators from one to four. All of the tour operators use helicopters and the majority of these flights are concentrated in the summer months at the rate of approximately 30 per day.

In addition, the Park Service has conducted a survey of park users at RMNP, which indicated that ninety-three percent of visitors considered tranquility to be an "extremely" or "very" important value in the park. Approximately ninety percent of the visitors surveyed stated that noise from helicopter tours would affect their enjoyment of the park. A copy of the survey has been placed in the docket of this proceeding.

Based upon this information from RMNP visitors, the growth of tour operations at these other parks, and the apparent representations of potential tour operators, the FAA has concluded

While the FAA has determined that a permanent rule regarding oversights of Rocky Mountain National Park by commercial tour operators should be made part of the overall rulemaking on overfights of all national park units, the FAA is taking this temporary action now to avert the introduction of such operators into RMNP while the national rule is completed. The experience gained from other national parks forms part of the basis for the Administrator's decision to move at this time to protect Rocky Mountain National Park.

Administrative Procedure Act

One commenter alleged that the FAA has failed to comply with the Administrative Procedure Act's notice and opportunity for comment requirements by failing to provide sufficient information to allow a meaningful response to Alternative Two. As an example, the commenter suggests that, under Alternative Two, the absence of maps and charts deprives the commenter of a meaningful opportunity to analyze the proposed routes.

Section 553(b) of the Administrative Procedure Act provides that ''notice shall include—(3) either the terms of substance of the proposed rule or a description of the subjects and issues involved.'' Under the alternatives section, the FAA solicited comments on numerous proposals, while requesting new ideas on possible restrictions. The Agency received many comments on the proposed alternatives, but no new alternative that had not already been proposed. (Had the FAA received a new, significantly different, proposal on which it relied, the FAA would have issued a Supplemental NPRM to solicit comments on the new proposal prior to taking action.) The number and specificity of the received comments demonstrate a general understanding of the proposed alternatives. Therefore, the FAA concludes that it has provided sufficient detailed information concerning the description of the subjects and issues involved to comply with the terms of the Administrative Procedure Act by affording interested parties with a meaningful opportunity to comment on the proposal.

''Natural Quiet'' Standard

One commenter challenged the action of the FAA as proposed in the NPRM by alleging that the actions of the FAA exceeded the Congressional mandate provided under Public Law 100–91 to substantially restore the natural quiet of the Park, because that standard was devised solely for the protection of the Grand Canyon. The commenter further opined that the attempt to achieve ''natural quiet'' in RMNP was inappropriate and without any Congressional mandate.

It is true that Public Law 100–91 was directed to restoring the ''natural quiet'' of Grand Canyon National Park only and not to the other parks in the national system. Public Law 100–91 provides for the substantial restoration of the natural quiet and experience of the Grand Canyon National Park and protection of public health and safety from adverse affects associated with aircraft overflights. The FAA is taking separate action on restoring the quiet of Grand Canyon National Park.

In this final rule, however, the FAA is carrying out President Clinton's directive to promote natural quiet at Rocky Mountain National Park. As noted above, the President's *Parks for Tomorrow* initiative specified that the restoration of natural quiet, and the natural enjoyment of RMNP are goals to be addressed by this rulemaking. By promulgating this final rule, the FAA is cooperating with the NPS to further the goal of protecting Rocky Mountain National Park, its environment, and visitors' enjoyment, to ensure that the potential problems associated with noise from commercial air tour operations do not arise while a long-term solution is

system with distinctions to be made among various categories of aircraft overflights. The law made no provision to identify or compare any impacts on the national park system from other activities or sources. To the extent that other activities, such as ground transportation, may have an adverse effect on parks' environment or visitor experience, these effects can be dealt with by the NPS under its authority.

NEPA Requirements

Some commenters maintain that the FAA should prepare an environmental impact statement (EIS) pursuant to the National Environmental Policy Act of 1969, prior to issuing the final rule because they contend that implementation of any of the alternatives of the proposed SFAR, except the ban alternative (Alternative 1), will have a significant adverse affect on the quality of the human environment.

According to the FAA's Environmental Order 1050.1D, the final rule is a Federal action which requires compliance with the NEPA. Consistent with the FAA Order 1050.1D, Para. 35, the FAA prepared a draft environmental assessment (DEA). The DEA did not disclose potentially significant direct or indirect impacts affecting the quality of the human environment. On November 21, 1996, the FAA announced the availability of the DEA for notice and comment. The comment period on the DEA remained open until December 23, 1996. Based on the comments received on the DEA and further analysis, the FAA has issued a Final EA. The FAA has determined that no additional environmental analysis is required and has issued a finding of no significant impact (FONSI). The final EA and FONSI has been issued and is available for review in the Docket. For copies of the documents, contact the person listed in the "FOR FURTHER INFORMATION CONTACT" section listed above.

This final rule constitutes final agency action under 49 U.S.C. 46110. Any party to this proceeding having a substantial interest may appeal the order to the courts of appeals of the United States or the United States Court of Appeals for the District of Columbia upon petition, filed within 60 days after entry of this Order.

EPA Consultation

One commenter states that the NPRM does not cite a statutory basis for the proposed action, but if the basis is 40 U.S.C. 44715, the FAA failed to consult the EPA.

The FAA is, in fact, relying on 40 U.S.C. 44715 and has consulted with EPA. The EPA believes that the environmental assessment adequately supports a finding of no significant impact.

Airline Deregulation Act

Another commenter believes that by promulgating the NPRM, the FAA has violated Section 102 of the Airline Deregulation Act of 1978 by failing to: (1) Encourage the entry of new carriers into air transportation, (2) foster the expansion of existing carriers into additional air transportation markets, and (3) insure the existence of a competitive airline industry. The commenter cites the possibility that interstate operators might become interested in commercial air tours in the future.

The statutory obligation to encourage development and competition among air carriers is not unconstrained. The FAA has authority to regulate, restrict, or prohibit activities by operators when necessary in the public interest. The final rule effects a temporary ban on commercial

or commercial air tours, is to avoid the unnecessary interruption of established commercial service by whatever regulation is adopted in the broader national rulemaking now underway on park overflights.

This rulemaking arose in response to public demand. The policy for preserving the natural enjoyment at our national parks has been formulated by the FAA to facilitate the adaptation of the air transportation system to the present and future needs and interests of the public. Any potential air tour operator currently evaluating whether to provide air tour operations within Rocky Mountain National Park will be able to participate in the development of the rulemaking on national park overflights at all parks, including RMNP.

Americans With Disabilities Act

Several comments were received alleging that the final rule will violate the Americans With Disabilities Act, § 2(a)(8) by depriving disabled persons of equal opportunity for full participation in the enjoyment of the Rocky Mountain National Park. According to these comments, commercial air tour operations will be the only way disabled individuals can enjoy the vistas of RMNP.

To the contrary, Rocky Mountain National Park offers an unique opportunity for disabled individuals to enjoy its spectacular vistas via its extensive road system. Approximately 54% of the RMNP can be viewed from some point along its 149 miles of winding road. In this aspect, RMNP is unique in its ability to provide access to recreational experiences via trails which allow access to backcountry and scenic vistas. Moreover, the NPS has established facilities and programs within RMNP to enhance the opportunities for visitors with disabilities to experience the Park. Thus, FAA believes that this rule does not violate the ADA.

Economic Costs

One commenter suggested that the FAA should conduct a cost/benefit analysis to determine whether the costs of implementing the NPRM will exceed its ultimate value to society. The imposition of this ban will not have an economic impact on commercial air tour operations over RMNP today because they are non-existent. Nor does the FAA consider it probable that significant levels of new services will arise during the temporary period between adoption of this rule and completion of the more comprehensive rulemaking on national park overflights. The FAA's intent is specifically to avert economic damage to commercial air tour operators by acting prior to one of more operators commencing business on the assumption that they will be allowed to operate over RMNP once the general rule is adopted. By acting expeditiously, the FAA will enable these operators to avoid making the capital investments necessary to engage in these operations that may be subject to future restrictions as part of the national rule.

However, it would be an error to minimize the true impetus for the final rule which is to preserve the natural resources at RMNP, including the quiet and solitude. In this respect, it is difficult to assign a monetary value to the benefit to be gained by this rule. Specifically with respect to the economic value attached to the preservation of environmental values, some economic analysis models (such as use of a "willingness to pay" analysis) could ascertain an economic value to society of such an asset. However, such analysis is not necessarily directly comparable in a cost/benefit basis with the economic valuations of costs and benefits that the FAA undertakes for other rulemakings. As a result, the information provided through such an effort would have little analytical or probative value.

terminate when national standards are adopted. However, in view of the strong local demand for action to ensure preservation of Rocky Mountain National Park and the ripeness of this proceeding, the FAA is taking the opportunity to establish temporary protective measures at RMNP while the national standards are being adopted. By Presidential Declaration dated April 22, 1996, the President directed the Secretary of Transportation to consider and draft a Notice of Proposed Rulemaking that would propose national standards for air tour overflights of the national parks. The FAA is working on that national rule currently and will follow rulemaking procedures, including proceeding with notice and opportunity for comment, prior to taking any final action. The FAA has designed its Rocky Mountain National Park rule to terminate on the adoption of national standards.

Certain commenters raised an objection that even though the air tour ban would apply to only commercial air tour operators, the rule proposed still represents an undue threat to the public right, including that of general aviation aircraft, to transit the navigable airspace of the United States. This final rule is strictly limited to overflights by commercial air tour operators over RMNP. Air tour operations differ from general aviation operations in the frequency of trips and their operational altitudes. In addition, air tours generally operate over picturesque areas where ground traffic congregates and at altitudes intended to maximize contact with these areas. Therefore, air tour operations are distinguishable from general aviation operations to such a degree as to remove any perceived threat to the right of general aviation aircraft to transit RMNP. Under the provisions of the final rule, all other aircraft will remain undisturbed in their current routes and altitudes of flight.

Quiet Technology

Another commenter recommends that rather than banning commercial air tours over the RMNP, the FAA should follow the recommendations of a 1994 report to Congress where the NPS suggested the use of quiet aircraft technology as a means of reducing the noise effect on National Parks. The NPS report to Congress suggested that quieter aircraft could be used in substantial restoration of natural quiet in Grand Canyon National Park (GCNP). It identified Dtt C–6–300, Vistaliner and Cessna 208 Caravan airplanes, and the McDonnell Douglas ''No Tail Rotor'' helicopters as the quietest aircraft currently operating in GCNP. The NPS made this determination based on its evaluation of aircraft certification data derived from applicable noise certification standards in Part 36 of Title 14 of the CFR, and from NPS flyover noise measurements taken in the park. Because of the temporary nature of this rule, the FAA determined that quiet technology would not provide an adequate alternative. Quiet technology ultimately holds great promise for ensuring the compatibility of air tour overflights and the maintenance of quiet for ground-based visitors of national parks. Indeed, movement toward the use of quiet technology forms a cornerstone of the FAA's proposal for a long-term solution to overflights of the Grand Canyon. And the FAA will want to explore the role quiet technology should play in the national rule. However, for this interim period, a temporary ban on commercial air tour operations will maintain the status quo and allow an orderly resolution of questions pertaining to quiet technology and other issues. To the extent that technological change would allow the operation of commercial air tours within RMNP in a manner consistent with the protection of the Park, its resources, and its enjoyment by visitors, the FAA will review this rule in the future.

The Lack of Air Tour Operators

Certain commenters questioned whether this rule was even necessary, because aerial tours do not operate over RMNP for obvious reasons: the high altitudes of the park; aircraft loading

The fact that commercial air tour service is being contemplated for RMNP supported the FAA determination that immediate action was necessary to preserve the natural enjoyment of visitors to RMNP by implementing a *temporary* ban on commercial air tour operations. In addition, the FAA believes it is critical to act expeditiously on this matter to avoid any potential environmental and economic impact.

Alternatives

As previously mentioned, the FAA is attempting to implement a regulation over RMNP that achieves the goal of preserving the natural enjoyment of the Park by visitors by averting the future and potential adverse effects of aircraft noise. The comments received on the alternatives were crucial in the FAA's decision. Based on the comments, the FAA determined that Alternatives 2 and 3 would not achieve the desired goal. Therefore, the FAA has determined that the best alternative in application and result would be Alternative One on a temporary basis.

In response to the voluntary agreement alternative and the comments received on that alternative, the FAA determined that since there are currently no air tour operators conducting operations over the Park, there are no operators to participate in a meaningful discussion and negotiation with the NPS officials at the Park. The FAA is appreciative of the willingness of certain aviation groups, such as USATA and HAI, to participate in the drafting and implementation of a voluntary agreement. However, without actual operators that would be willing to be made a party to the voluntary agreement, the FAA determined that this alternative would not achieve its desired goal.

Alternative 2 proposed to permit sightseeing tours with several suggested limitations. The FAA partially agrees with some of the commenters who stated that the imposition of partial restrictions would not provide a meaningful result for the commercial air tour operators or achieve the goal of this rulemaking. Moreover, in reviewing the different options that could be used in conjunction with air tour restrictions listed in Alternative 2, the FAA concluded that the application of these options would be operationally difficult for the commercial air tour operators. The terrain within RMNP is quite varied and irregular, with mountain peaks and valleys differing in elevations by thousands of feet. This forces a pilot to be more attentive to the varying topography.

The FAA agrees with the commenters that cited the difficulty in requiring air tour operators to conduct operations only over the existing roadways in RMNP. Certain flight corridors may become necessary in the future, but their establishment will necessitate a much more comprehensive aeronautical and environmental review that just designating the existing roadways. Given the challenging operational environment, the FAA agrees with those comments which claim that restrictions based on the season, time of day, or day of the week would be economically unfeasible for air tour operators.

As noted above, the FAA can reasonably infer from the varied and instructional information received at other parks as to the effects of aircraft noise due to commercial air tour operations. An altitude restriction that would increase the minimum altitude above 2,000 feet above ground level would still have the potential to adversely impact both visitors and resources. Therefore, the FAA determined that the most efficient method of mitigating the potential adverse effects from aircraft noise in this particular case would be to place the preemptive ban on all commercial air tour operations.

at a number of units of the national park system, and are growing in popularity in others. Many park areas have either documented or estimated significant increases in the volume of air tour activity over the last ten years. For example, air tour flights over Grand Canyon National Park have increased from a few hundred flights per year in the 1960's, to 40,000 to 50,000 per year in 1986, to 80,000 to 95,000 per year in 1996, with up to 40 companies offering sightseeing flights over the park, according to industry, FAA and/or media estimates. Experience at Hawaii Volcanoes and Haleakala National Park in Hawaii has been similar in trend but lower in magnitude, with highs of 23,000 flights per year and 10 operators estimated at Hawaii Volcanoes.

Hard statistics are lacking on the number of sightseeing operations conducted over national park areas because, with the exception of recent fee legislation for Grand Canyon, Hawaii Volcanoes, and Haleakala National Parks, there are no requirements for operators to provide such data. Even at the three parks in the fee legislation, accurate data has not been readily available. In virtually all cases, overflight data has to be estimated based upon a variety of sources, such as airport operations data, limited field observations, FAA projections for airport master planning, industry publications, and voluntary responses to surveys and requests for information.

The trends based upon such numbers indicate increasing interest and levels of sightseeing operations over many national park areas, which correlates with trends for ground visitation. For example, Glacier National Park estimates that between 1986 and 1996 the number of overflights increased from 100 to 800 per year, and the number of commercial air tour operators increased from one to five. Mount Rushmore estimated an increase from 2,400 to 4,000 overflights and from one to four operators during the same time period. Sightseeing tour operators have become based within a few miles of the park boundary during the past two years at Bryce Canyon and Canyonlands, with major expansion of airport facilities either proposed or approved to accommodate increasing tour operations at both places. At present, a new helicopter tour operation is in the process of starting up at Chickamauga-Chattanooga National Military Park.

The extended comment period closed on December 23, 1996. Forty-nine submissions were received during the reopened comment period, most of which were substantive comments on the proposed rule. Many of the commenters during the reopened period had commented previously, but were either supplementing their prior comments or were adding to or extending their arguments.

Thirty-one commenters used the reopened comment period to express overall support for a complete ban on commercial tour overflights. These include the comments from the Estes Valley Improvement Association, the Town of Grand Lake, CO, the National Parks and Conservation Association, the Pourdre Canyon Group of the Sierra Club, the Estes Park League of Women Voters, and the League of Women Voters of the United States and numerous individuals. These commenters typically stressed the need to maintain the natural enjoyment of the Park's solitude and quiet and argued that overflights by commercial air tour operators would adversely affect that enjoyment. Among those expressing general opposition to the proposal were several other individuals and Bell Helicopters Textron, Inc. Every comment submitted during the reopened comment period was read and considered, although neither all comments nor all points raised will be addressed individually in this preamble. Many of the arguments presented are similar to those that were submitted earlier and discussed above. Several comments, however, suggested new arguments against the imposition of a ban on commercial tour overflights, and these are discussed below.

time for further analysis. However, several commenters such as the League of Women Voters, the Estes Valley Improvement Association, Inc., and the Town of Grand Lake, stated that the time allowed was sufficient to analyze the DEA and found the document adequate in its review of the relevant environmental consequences associated with this rule. Further, as discussed above, the FAA believes that prompt completion of this rulemaking is necessary, because the proposed ban on commercial air tours contained in the NPRM may affect the business and investment decisions of operators. Therefore, while in the abstract it is always desirable to have more rather than less time for public comments, that desire must be balanced against the need to complete the rulemaking in a timely manner. This means that the temporary ban should be implemented before any air tour operator attempts to start commercial air tour operations at RMNP and then is adversely affected financially by the imposition of the subsequent ban. Experience at other national park units suggests that while commercial air tour operations do not cease in the winter months, the number of commercial air tour operations in the winter (as well as the number of new start-up air tour businesses) is not as high as in the warmer months of the year. Therefore, the FAA wants to impose the temporary ban in the more dormant months of the year before new air tour operations are started.

Even though the comments offered by Southwest Safaris (Safaris) focus on the DEA, Safaris alleges certain points that pertain both to the DEA and this final rule. Safaris argues, among other things, that the FAA has no basis on which to ban overflights by commercial air tour operations, because there are no such operations currently. In the absence of such operations, Safaris argues, there is no ''measurable'' need to prohibit them. Safaris also dismisses National Park Service data indicating that approximately 90 percent of park visitors surveyed stated that noise from helicopters would affect their enjoyment of the park. (''In the last sentence, the word, 'would,' does not mean 'does.' The impact of helicopter noise over RMNP is entirely hypothetical.'') The problem with Safaris' argument is that it necessarily implies that the FAA has no authority to act to prevent reasonably foreseeable problems before they occur, and this is simply false. The agency is not obliged to wait until damage occurs before exercising its authority to stop such damage. This issue arises more frequently in the safety context, where most of FAA's regulations arise, but it applies with no less force in the exercise of FAA's other authorities.

Safaris also challenges the FAA's right to apply information gained from experience with commercial tour overflights of other national parks to RMNP. While each park has unique characteristics, the FAA believes that some general understanding can be gained with respect to the business of conducting tour overflights, including its growth pattern and market considerations. The FAA's and NPS experience extends as well to an appreciation of the effect of such overflights on park visitors and resources. While specific topography and park characteristics must be taken into account, the agencies general knowledge can and must inform its projections about the nature and effects of any air tour operations at RMNP. The FAA acknowledges that additional information would improve our ability to forecast specific noise impacts. The agency has determined to impose only a temporary ban on commercial tour overflights at RMNP while a broader rule is considered. This rulemaking allows the FAA to prevent an overflight problem from air tour overflight from developing in RMNP, as it has in so many other national parks.

Safaris goes on to argue, as does the Northern California Airspace Users Working Group, that air tour operations increase rather than diminish the value of parks, and that compared to automobile visitors, air tour visitors cause less damage to park resources. The FAA will not be drawn into any attempt to compare the benefits and costs to park resources of air

language is too vague to be enforceable. HAI claims that the proposed rule would prohibit regional air carrier and on-demand air taxi flights that now traverse the park. The FAA has already addressed the argument that a prohibition on air tours at RMNP would also apply to other kinds of air operations. The short answer is that it would not. The FAA has the same response to the comment of the Soaring Society of America. The Soaring Society's comment argues that gliders do not pollute measurably, either in noise or emissions, and it states the Society would therefore oppose a general ban of aircraft flights over a National Park. The FAA has not imposed any general ban on all aircraft at Rocky Mountain National Park. Only commercial air tour operations would be affected by the temporary ban adopted in this rule.

As to HAI's suggestion here that air tour operations cannot be distinguished from point-to-point service, we believe that neither the operators nor the FAA will have any difficulty in understanding the difference between the high-frequency air tour service that concentrates at places of particular interest and flights that travel as directly as feasible between two distant cities, and happen to traverse the park on a particular route. However, if HAI believes, as it says, that a more specific definition is necessary, we invite HAI to propose one, either for future use at RMNP or as part of the development of a national rule on air tour overflights at national parks.

Regulatory Evaluation

Federal regulations must undergo several economic analyses. First, Executive Order 12866 directs that each Federal agency shall propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 requires agencies to analyze the economic effect of regulatory changes on small entities. Third, the Office of Management and Budget directs agencies to assess the effects of regulatory changes on international trade. In conducting these analyses, the FAA has determined that this rule is a ''significant regulatory action'' as defined in the Executive Order and the Department of Transportation Regulatory Policies and Procedures.

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (RFA) helps to assure that Federal regulations do not overly burden small businesses, small non-profit organizations, and airports located in small cities. The RFA requires regulatory agencies to review rules which may have ''a significant economic impact on a substantial number of small entities.'' A substantial number of small entities, defined by FAA Order 2100.14A—''Regulatory Flexibility Criteria and Guidance,'' is more than one-third, but not less than eleven, of the small entities subject to the existing rule. To determine if the rule will impose a significant cost impact on these small entities, the annualized cost imposed on them must not exceed the annualized cost threshold established in FAA Order 2100.14A.

Changes to Federal regulations must undergo several economic analyses. First, Executive Order 12866 directs that each Federal agency shall propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 requires agencies to analyze the economic effect of regulatory changes on small entities. Third, the Office of Management and Budget directs agencies to assess the effects of regulatory changes on international trade. In conducting these analyses, the FAA has determined that this rule is ''a significant regulatory action'' as defined in the Executive Order and the Department of Transportation Regulatory Policies and Procedures.

analysis, which includes the identification and evaluation of cost-reducing alternatives to this rule, has not been prepared.

Costs

At present there are no air tour operations over RMNP and, despite some expression of interest, none have taken definitive action to initiate service at this time. Considering the historical record, the FAA assumed that this final rule will not lead to increased costs to an operator over the next ten years since there are no operators. Moreover, applications for air tour operations have been repeatedly turned down by the town of Estes Park, and it is unlikely that opposition to air tour operators will lessen over time there.

However, while there are no air tour operators that are currently expected to operate in RMNP, information supplied to the docket shows that from time to time small operators have tried to gain approval for operating over RMNP from local authorities. In order not to overlook the potential costs imposed by this rule to potential operators in this analysis, the FAA has attempted to estimate this potential cost. To estimate the potential costs to these potential operators, the FAA employed recent data from the proposed rulemaking on ''Flight Rules in the Vicinity of Grand Canyon National Park.''

Financial data from two small scheduled fixed wing operators and a helicopter operator that operate over the Grand Canyon were utilized. The three operators chosen are: a 5 passenger CE 206 operator, a 3 passenger Piper Pa–28–180 airplane operator, and a SA–341–G helicopter operator. The estimated annual operating revenues for these operators are respectively, $53,000, $10,000, and $16,000.

Even if the FAA assumes that three relatively small operators would eventually gain authority to operate over RMNP in the next ten years, the costs will still be quite small. The FAA estimates costs in lost revenues to operators due to this rule will range from zero, which is most likely, to $79,000 per year if three operators are denied the ability to do business over RMNP due to the rule.

Benefits

This rule serves to preserve the desired state of quiet and solitude in the park. Currently, the natural enjoyment of the Park is not disturbed by air tour operators and will not be after the rule is promulgated.

Conclusion

Small entities potentially affected by the final rule are potential air tour operators that in the absence of the rule would operate over Rocky Mountain National Park. The FAA estimates from zero to three operators might be affected by the rule, well below the substantial number criteria. The FAA thus concludes that there will not be a significant economic impact on a substantial number of small entities.

International Trade Impact Analysis

The final rule will not have any impact on international trade because the potentially affected operators do not compete with foreign operators. The rule also will not constitute a barrier to international trade, including the export of U.S. goods and services to foreign countries and the import of foreign goods and services to the United States.

International Civil Aviation Organization and Joint Aviation Regulations

In keeping with United States obligations under the convention on International Civil Aviation, it is FAA policy to comply with International Civil Aviation Organization Standards and Recommended Practices (SARP) to the maximum extent practicable. For this action, the FAA has reviewed the SARP of Annex 10. The FAA has determined that this action will not present any differences.

Paperwork Reduction Act

In accordance with the Paperwork Reduction Act of 1995 (Pub. L. 104–13), there are no requirements for information collection associated with the proposed regulation.

Conclusion

For the reasons set forth above, the FAA has determined that this rule is a significant regulatory action under Executive Order 12866. The FAA certifies that this rule will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. This rule is considered significant under DOT Regulatory Policies and Procedures.

The Amendment

The FAA wishes to be responsive to concerns about the effects of overflights on the national park system. For that reason and due to the unique situation at RMNP the FAA is temporarily banning commercial air tour operations in the vicinity of the RMNP for sightseeing purposes for the limited duration of the SFAR. In consideration of the foregoing, the Federal Aviation Administration amends Title 14 of the Code of Federal Regulations (14 CFR) parts 91, 119, 121, and 135 effective February 7, 1997.

The authority citation for part 121 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 40119, 44101, 44701–44702, 44705, 44709–44711, 44713, 44716–44717, 44722, 44901, 44903–44904, 44912, 46105.

---

the operation of an aircraft carrying passengers for compensation or hire for aerial sightseeing.

[Section 3. *Restriction.* No person may conduct a commercial air tour operation in the airspace over Rocky Mountain National Park, CO.

[*Expiration:* This SFAR will expire on the adoption of a final rule in Docket No. 27643.]

(Corrected in 62 FR 15570, April 1, 1997)

SUMMARY: The FAA is amending parts 21, 25, 91, 119, 121, 125, and 135 to correct errors, make terminology consistent, or clarify the intent of the regulations published on December 20, 1995 (60 FR 65832). A few changes are to clarify existing rules or to deal with other long-standing exemptions. A new Special Federal Aviation Regulation is being issued to address three problems that relate to compliance with requirements for communications facilities and aircraft dispatchers by operators in Alaska and other areas.

NOTE: Please refer to preamble pages P–1352 through P–1363 for entire preamble.

---

of 7,500 pounds or less under part 121 of this chapter.

[b. The certificate holder conducts domestic operations in Alaska under part 121 of this chapter.

[2. *Alternative requirements.*

[a. If an operator described in paragraph 1.a. of this SFAR is conducting a flight with an airplane described in 1.a. and if communications cannot be maintained over the entire route (which would be contrary to the requirements of § 121.99 of this chapter), such an operator may continue to operate over such a route subject to approval by the Administrator. In granting such approval the Administrator considers the following:

i. The operator has an established dispatch communication system.

ii. Gaps in communication are not over the entire route, but only over portions of the route.

iii. When communication gaps occur, they occur due to one or more of the following:

A. Lack of infrastructure.

B. Geographical considerations.

C. Assigned operating altitude.

iv. Procedures are established for the prompt re-establishment of communications.

v. The operator has presented a plan or schedule for coming into compliance with the requirements in § 121.99 of this chapter.

[b. A certificate holder who conducts domestic operations in Alaska may, notwithstanding the requirements of § 121.99 of this chapter, use a communication system operated by the United States for those operations.

[c. An operator described in paragraph 1.a. of this SFAR who conducts operations in Alaska may share the aircraft dispatcher required by § 121.395 with another operator described in paragraph 1.a. of this SFAR who conducts operations in Alaska if authorized to do so by the Administrator. Before granting such an authorization, the Administrator considers:

i. The operators' joint plans for complying with the aircraft dispatcher training rules in subpart N of part 121 of this chapter and the aircraft dispatcher qualification and duty time limitation rules in subpart P of part 121 of this chapter.

ii. The number of flights for which the aircraft dispatcher would be responsible.

iii. Whether the responsibilities of the dispatcher would be beyond the capability of a single dispatcher.

[3. *Expiration.* This Special Federal Aviation Regulation terminates on March 12, 2001, unless sooner terminated.]
